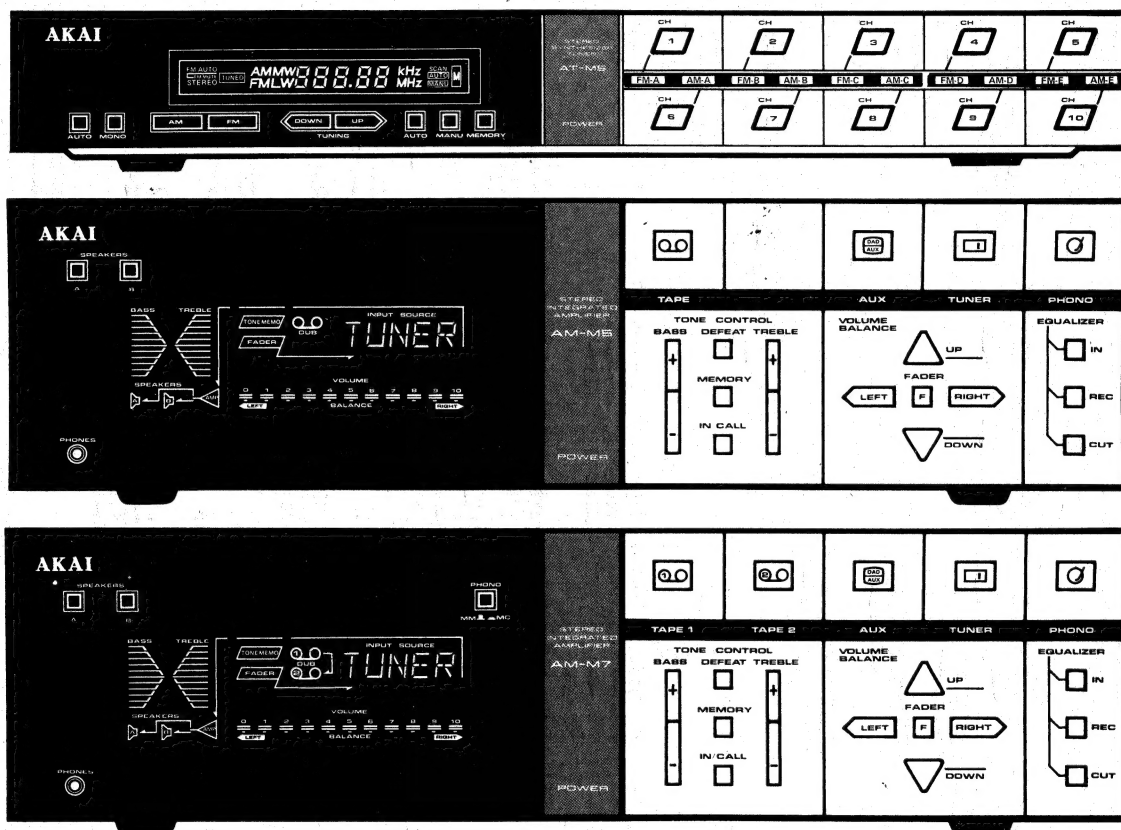


AKAI SERVICE MANUAL



QUARTZ SYNTHESIZER TUNER

MODEL **AT-M5/L**

STEREO INTEGRATED AMPLIFIER

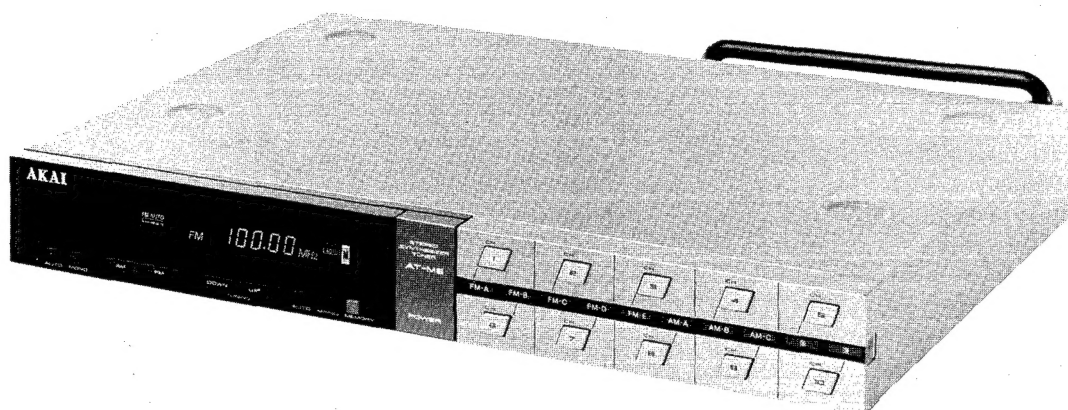
MODEL **AM-M5**

MODEL **AM-M7**

ABBREVIATIONS FOR SERVICE MANUAL

MODEL AT-M5/L, MODEL AM-M5/M7

| ABBREVIATION | EXPLANATION | ABBREVIATION | EXPLANATION |
|--------------|---|--------------|-------------------------------|
| AC | Alternating Current | LSI | Large-Scale Integration |
| AF | Audio Frequency | LW | Long Wave |
| AFC | Automatic Frequency Control | MANU | MANUal |
| AGC | Automatic Gain Control | MC | Memory Control |
| ALC | Automatic Level Control | MIX | MIXer |
| AM | Amplitude Modulation | MM | Moving Magnet (cartridge) |
| ANT | ANTenna | M. ME | Memory |
| APPROX | APPROXimately | MONO | MONOphonic |
| BCD | Binary Coded Decimal | MPX | MultiPlex |
| BUF | BUFfer | NF | Negative Feedback |
| CK | Clock | OSC | OSCillator |
| CMOS | Complementary Metal-Oxide Semi-Conductor | RL | ReLay |
| CPU | Central Processing Unit | PLL | Phase Locked Loop |
| DET | DETEctor | PSC | PreSCaler |
| EIAJ | Electronic Industry Association of Japan | RAM | Random Access Memory |
| EQ | EQualizer | RCH | Right CHannel |
| FF | Flip-Flop | REG | REGulator |
| FLD | FLuorescent Display | RF | Radio Frequency |
| FM | Frequency Modulation | ROM | Read Only Memory |
| FREQ | FREQuency | SEG | SEGment |
| GND | GrouND | SENS | SENSitivity |
| H | High (referring to voltage) | SM | Signal Meter |
| IF | Intermediate Frequency | SSG | Standard Signal Generator |
| IHF | Institute of High Fidelity | ST | STereo |
| IND | INDicator | STO | STOre |
| INH | INHibit | SW | SWitch |
| INT | INTerrupt | SYNC | SYNChronize |
| L | Low (referring to voltage) | THD | Total Harmonic Distortion |
| LCD | Liquid Crystal Display | VCO | Voltage Controlled Oscillator |
| LCH | Left CHannel | XT | Crystal Controlled Connection |
| LED | Light Emitting Diode | | Terminal |
| LPF | Low Pass Filter | XTAL | CrysTAL |



SECTION 1

SERVICE MANUAL

MODEL AT-M5/L

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I . SPECIFICATIONS

FM TUNER SECTION

| | |
|---|--|
| TUNING FREQUENCY RANGE | J Model: 76MHz to 90MHz Other Models: 87.4MHz to 108.1MHz |
| USABLE SENSITIVITY (IHF) | 11.2dBf |
| QUIETING SENSITIVITY (S/N=50dB) MONO/ST | 16.2/37.2dBf |
| CAPTURE RATIO | 1.5dB |
| SELECTIVITY (400kHz) | 60dB |
| IMAGE REJECTION | 85dB |
| IF REJECTION | 90dB |
| SPURIOUS REJECTION | 90dB |
| AM SUPPRESSION | 60dB |
| SUB CARRIER SUPPRESSION | 60dB |
| S/N RATIO MONO/ST | 75/65dB |
| T.H.D (MONO/ST) | 0.08/0.3% |
| STEREO SEPARATION (1kHz) | 45dB |

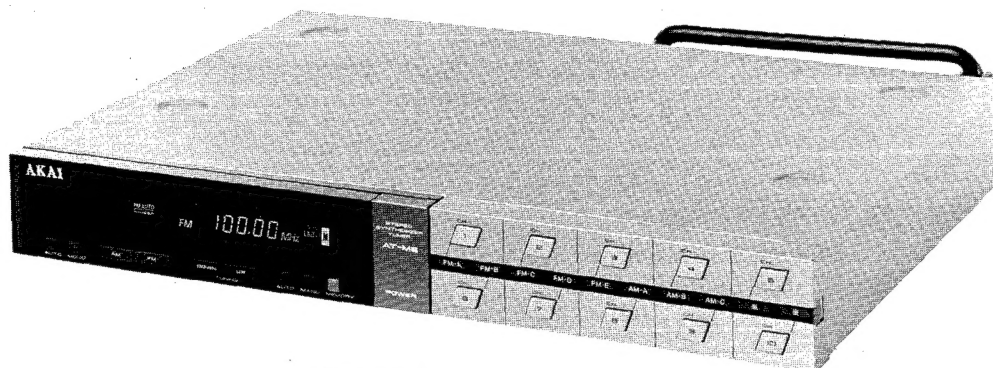
AM TUNER SECTION

| | | |
|---------------------------|--|---------------------|
| TUNING FREQUENCY RANGE | MW 530 to 1610kHz (USA & Canada) 522 to 1611kHz (Others) | LW 153 to 360kHz |
| USABLE SENSITIVITY (LOOP) | 300μV/m | 800μV/m |
| SELECTIVITY | 25dB | 30dB |
| IMAGE REJECTION | 40dB | 45dB |
| IF REJECTION | 55dB | 55dB |
| S/N RATIO | 40dB | 35dB |
| T.H.D | 1% | — |
| MEMORY BACK-UP | 20 Days | |

OUTPUT SECTION

| | |
|--------------------|---|
| OUTPUT LEVEL | |
| FM (100% MOD) | 700mV |
| AM (30% MOD) | 250mV |
| OUTPUT IMPEDANCE | 1.5 kohms |
| POWER REQUIREMENTS | 100V, 50/60Hz for Japan 120V, 60Hz for USA & Canada 220V, 50Hz for Europe except for UK 240V, 50Hz for UK & Australia 110-120V/220-240V, 50/60Hz Switchable for other countries |
| POWER CONSUMPTION | 10W (All Models) |
| DIMENSIONS | 350 (W) × 50 (H) × 274 (D)mm (13.8 × 2 × 10.8 inches) |
| WEIGHT | 2.5kg (5.5 lbs) |

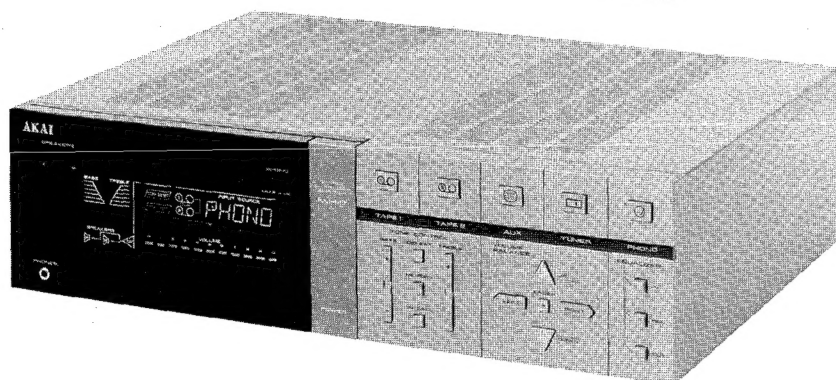
* For improvement purposes, specifications and design are subject to change without notice.



AT-M5/L



AM-M5



AM-M7

QUARTZ SYNTHESIZER TUNER MODEL AT-M5/L

STEREO INTEGRATED AMPLIFIER AM-M5 MODEL AM-M7

| | | |
|-----------|-------------------------------------|----|
| SECTION 1 | MODEL AT-M5/L SERVICE MANUAL | 3 |
| SECTION 2 | CIRCUIT OPERATION DESCRIPTION | 27 |
| SECTION 3 | MODEL AM-M5/M7 SERVICE MANUAL | 35 |
| SECTION 4 | PARTS LIST | 61 |
| SECTION 5 | SCHEMATIC DIAGRAM | 77 |

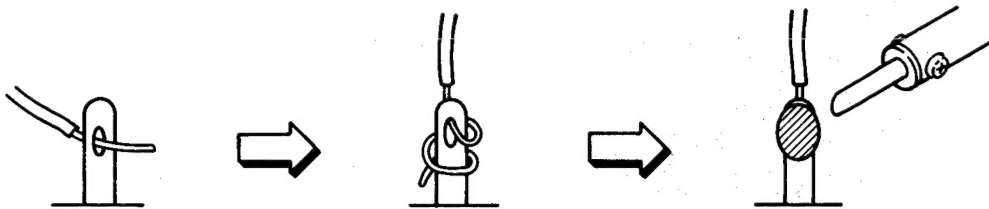
SAFETY INSTRUCTIONS

SAFETY CHECK AFTER SERVICING

Confirm the specified insulation resistance between power cord plug prongs and externally exposed parts of the set is greater than 10 Mohms, but for equipment with external antenna terminals (tuner, receiver, etc.) and is intended for **C** or **A**, specified insulation resistance should be more than 2.2 Mohms (ground terminals, microphone jacks, headphone jacks, line-in-out jacks etc.)

PRECAUTIONS DURING SERVICING

1. Parts identified by the \triangle symbol parts are critical for safety.
Replace only with parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation. These must also be replaced only with specified replacements.
Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
 - 1) Wires covered with PVC tubing
 - 2) Double insulated wires
 - 3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
 - 1) Insulation Tape
 - 2) PVC tubing
 - 3) Spacers (Insulating Barriers)
 - 4) Insulation sheets for transistors
 - 5) Plastic screws for fixing microswitch (especially in turntable)
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap ends of wires securely about the terminals before soldering.

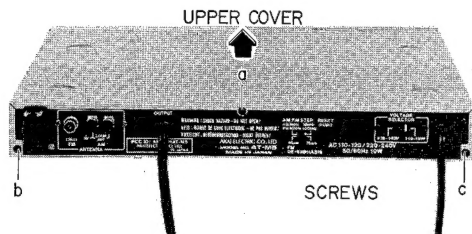


6. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Use care that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

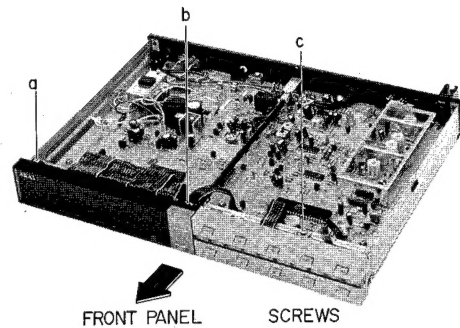
II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.

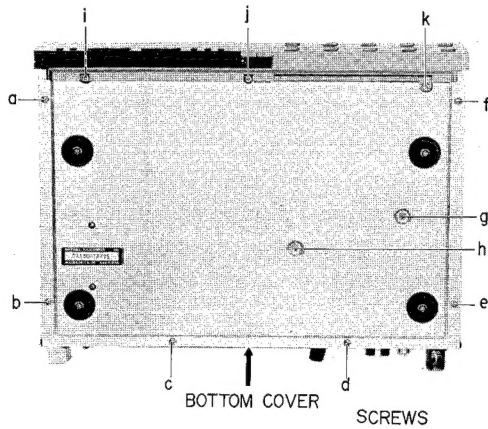
1



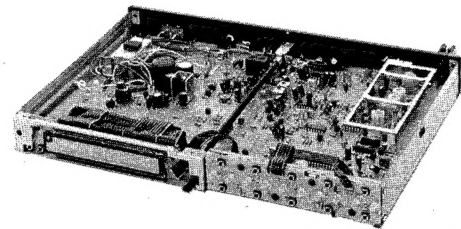
3



2



4



III. CONTROLS

3-1. CONTROLS

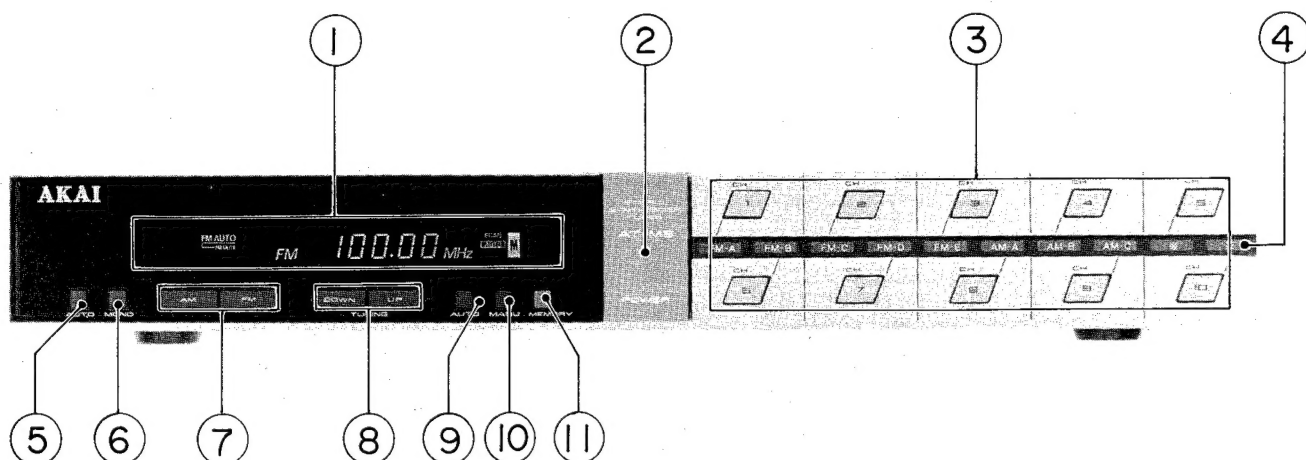


Fig. 3-1

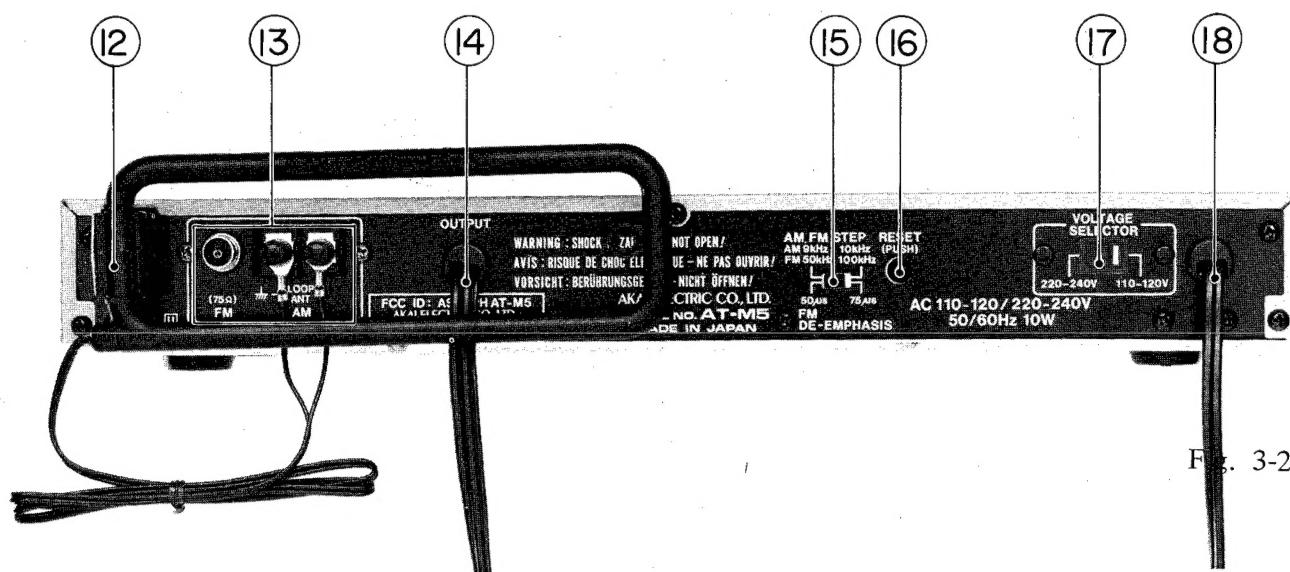


Fig. 3-2

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. FL DISPLAY THE INDICATOR OF : FM AUTO; FM MUTE, STEREO, TUNED, FM, AM, MW, LW, kHz, MHz, SCAN (AUTO/MANU), & M (MEMORY). 2. POWER SWITCH 3. PRESET STATION BUTTONS (CH1~CH10) 4. PRESET STATIONS INDICATOR 5. AUTO BUTTON : FM AUTO (FM MUTE) 6. MONO BUTTON : FM MONO 7. AM/FM SELECTOR (FM/MW/LW SELECTOR FOR MODEL AT-M5L) 8. TUNING UP/DOWN BUTTON | <ol style="list-style-type: none"> 9. AUTO BUTTON : AUTOMATIC SCAN TUNING 10. MANU BUTTON : MANUAL SCAN TUNING 11. MEMORY BUTTON : FOR PRESET STATIONS 12. AM LOOP ANTENNA 13. ANTENNA TERMINALS FOR FM (75Ω) & AM LOOP ANTENNA 14. OUTPUT CORD 15. AM FM STEP & FM DE-EMPHASIS SELECTOR (U MODEL ONLY) 16. RESET BUTTON 17. VOLTAGE SELECTOR (U MODEL ONLY) 18. POWER CORD |
|--|---|

3.2 RESET BUTTON AND AM.FM STEP/FM DE-EMPHASIS SELECTOR (REFER TO Fig. 2,3 & 4)

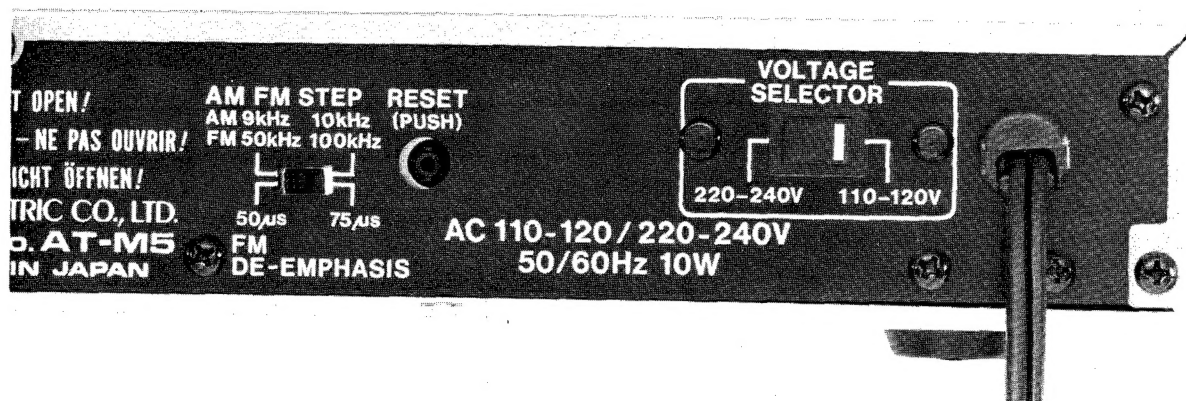


Fig. 3-3 Rear View (U Model)

3-2-1. RESET BUTTON

At the back of the AKAI AT-M5/L, there is a RESET button which sets the micro-computer inside the AKAI AT-M5/L to the initial modes when it is depressed. Depress this button should the following occur when the backup power for the micro-computer's memory is insufficiently charged.



Fig. 3-4

1) The AKAI AT-M5/L will not function when a button is depressed.

2) A frequency is not properly displayed.

* If it is difficult to depress the RESET button, use a screwdriver or a ball point pen.

When the RESET button is depressed while the AKAI AT-M5/L is turned on, it will go into the following initial modes:

3) The AKAI AT-M5/L will go into FM reception.

4) The frequency will be set to 76MHz. (J model).
87.4 MHz (Other models)

5) The tuning mode will be set to manual.

6) All the preset stations will be canceled.

After depressing the RESET button, you must reset the preset stations again.

3-2-2. AM FM STEP/FM DE-EMPHASIS SELECTOR (Not on some models)

Use this selector to set the frequency scanning steps and to de-emphasize the Dolbyized FM signal in amount equal to the emphasis made at the broadcasting station. Set this selector according to your area.

Attention

After setting this selector, turn ON the AKAI AT-M5/L and then depress the RESET button.

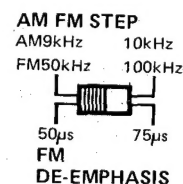


Fig. 3-5

IV. PRINCIPAL PARTS LOCATION

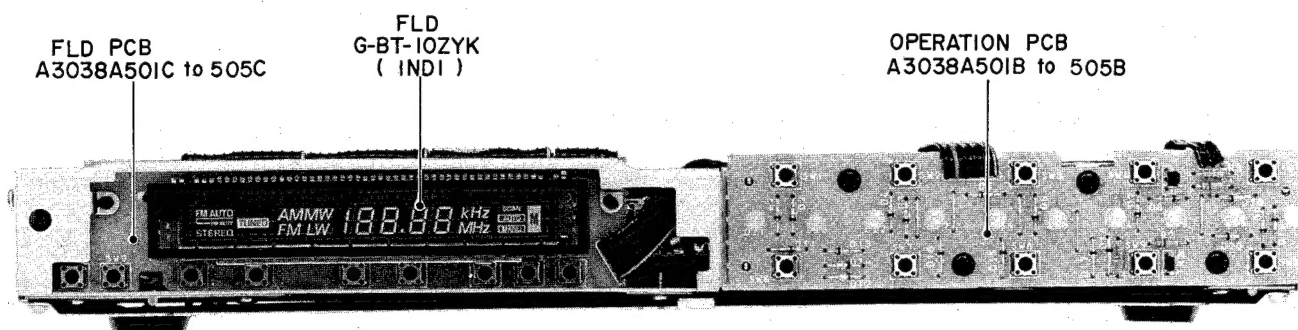


Fig. 4-1

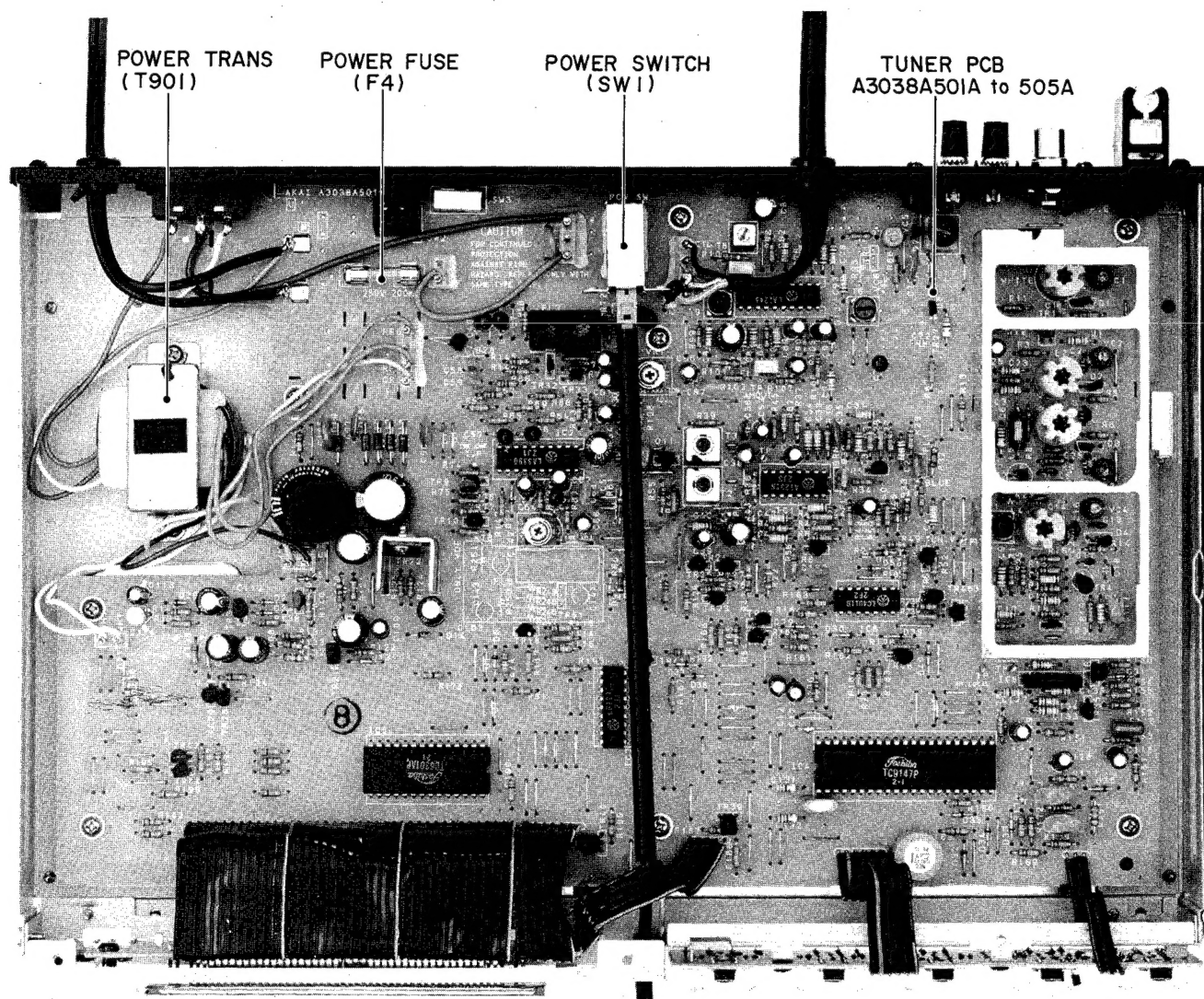


Fig. 4-2

V. VOLTAGE CONVERSION

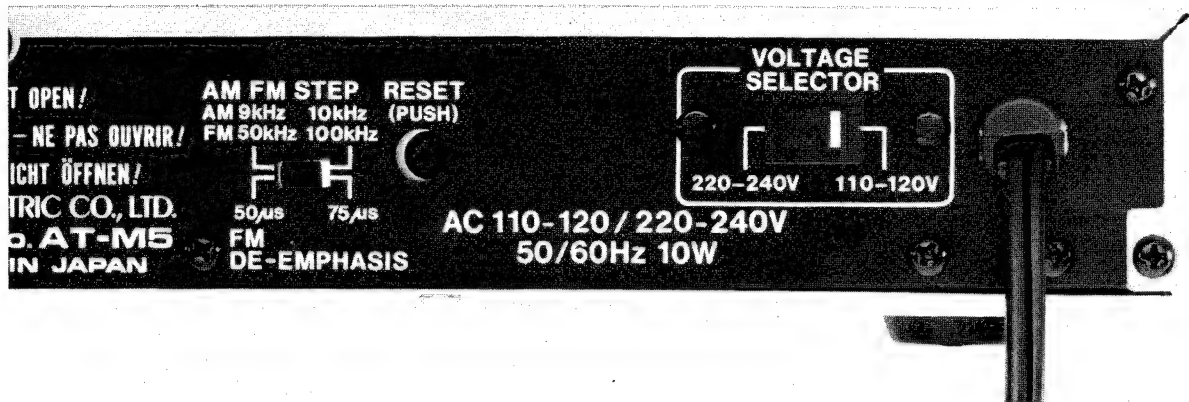


Fig. 5-1 Rear View (U Model)

Models for Japan, Canada, USA, UK and Australia are not equipped with this facility. Each machine is preset at the factory according to destination.

However, if voltage conversion is necessary, it is accomplished as follows:

- (1) Disconnect the power cord.
- (2) Set the voltage selector located on the rear panel to the proper position with a screwdriver.

6-1. FM SECTION BLOCK DIAGRAM

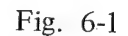


Fig. 6-2

6-3. THE PERIPHERAL CIRCUIT OF CPU (IC4TC9147P) AND FL DISPLAY (IND1 9-BT-10ZYK)

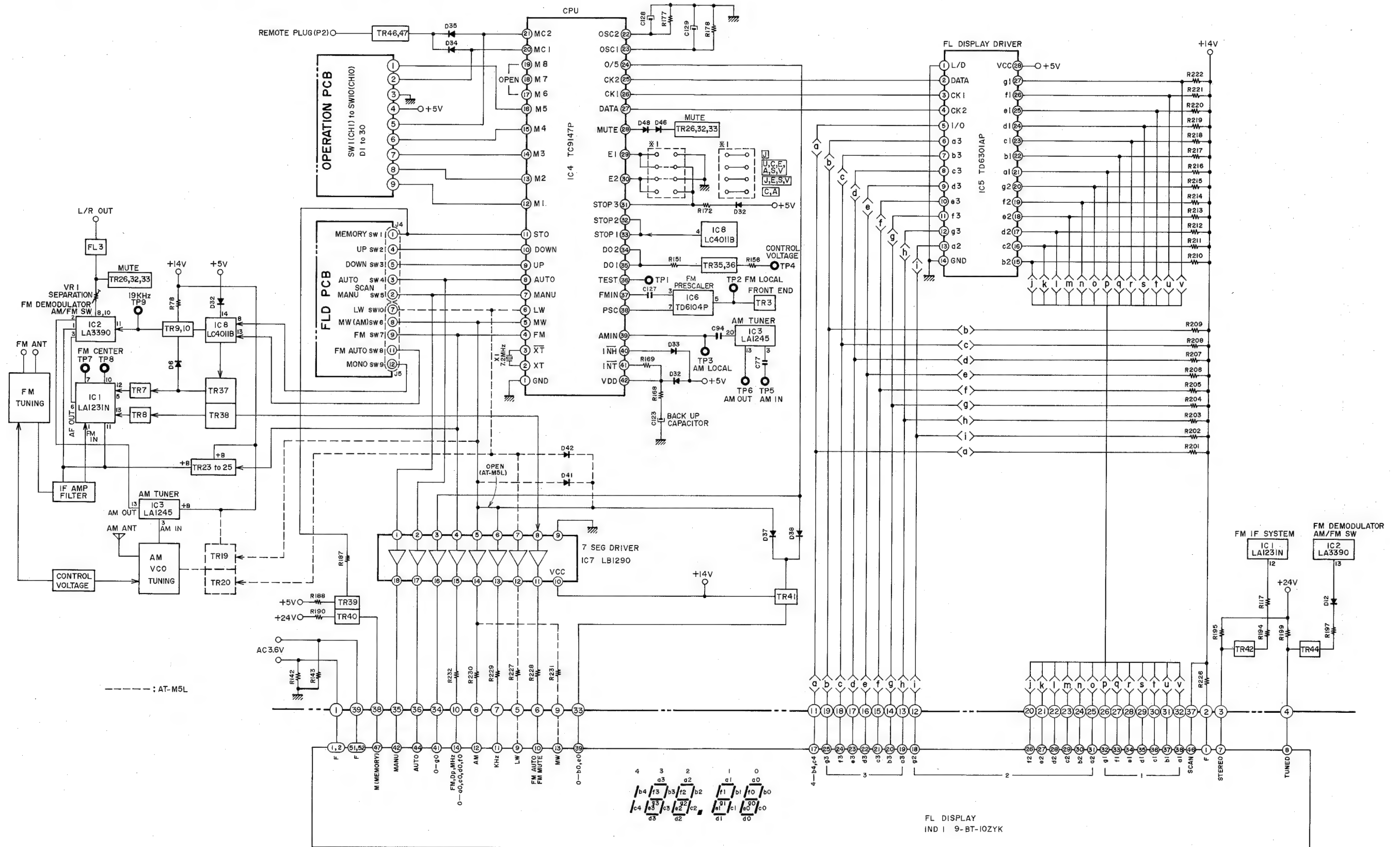
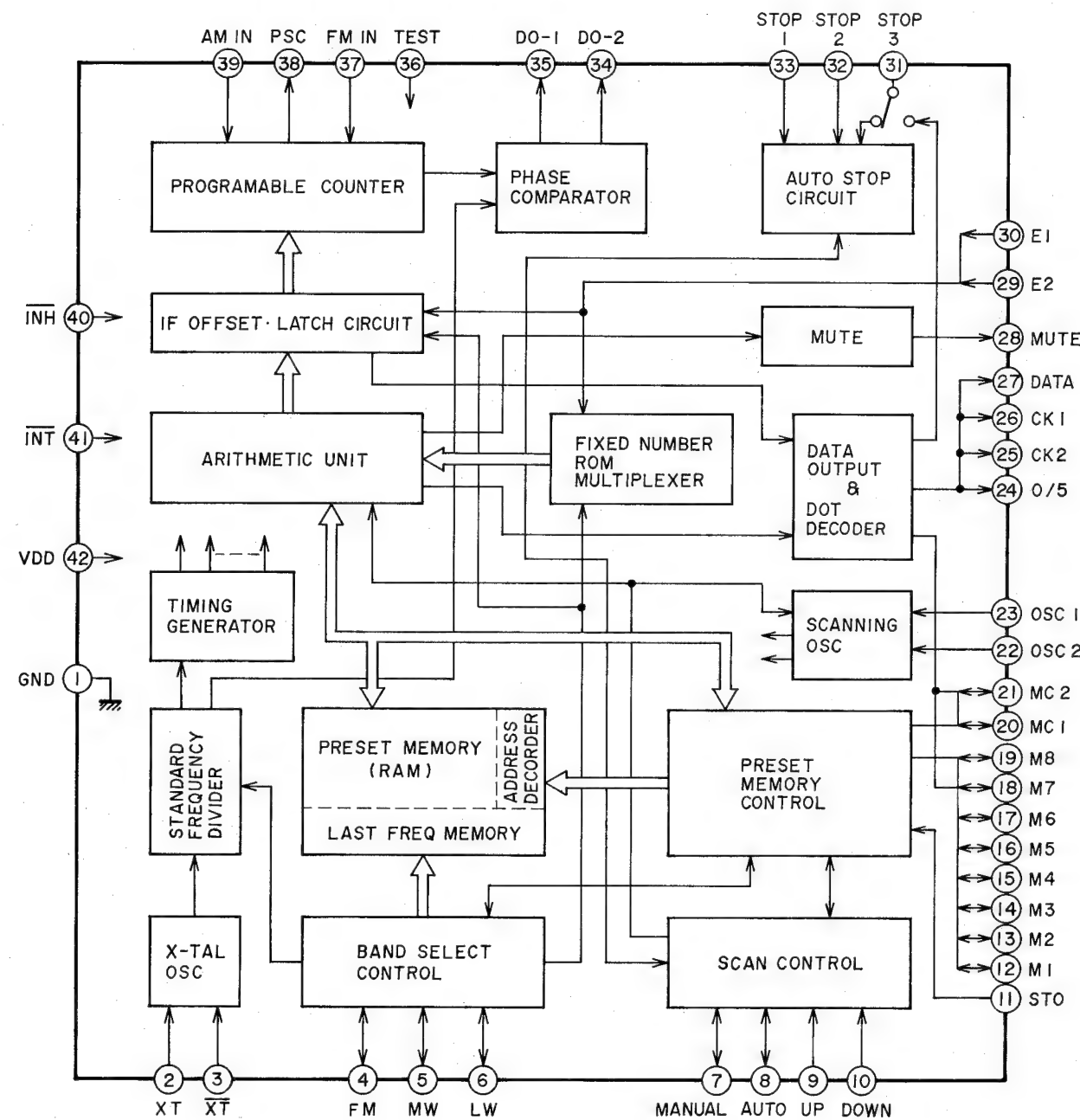
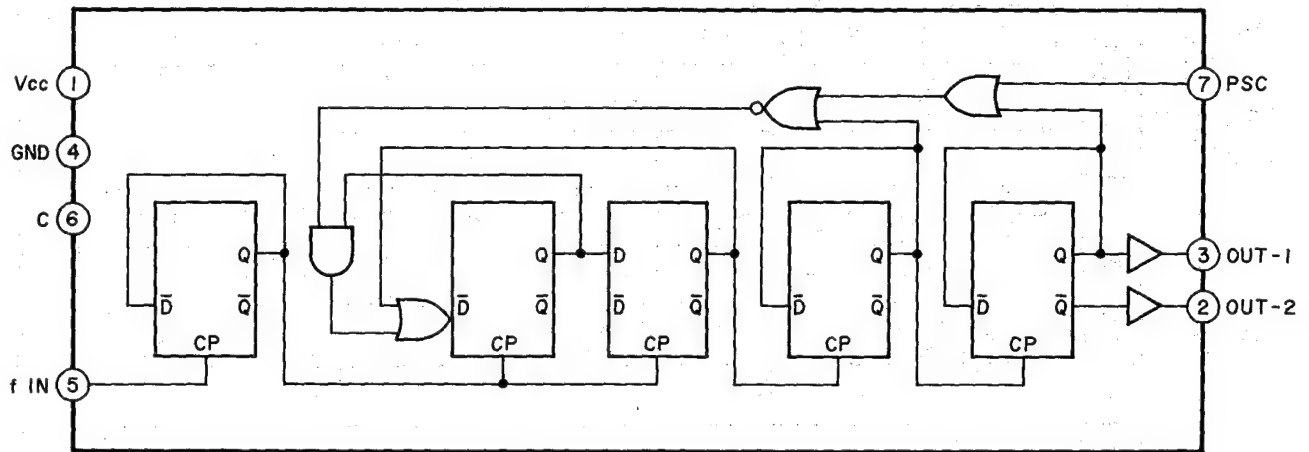


Fig. 6-3



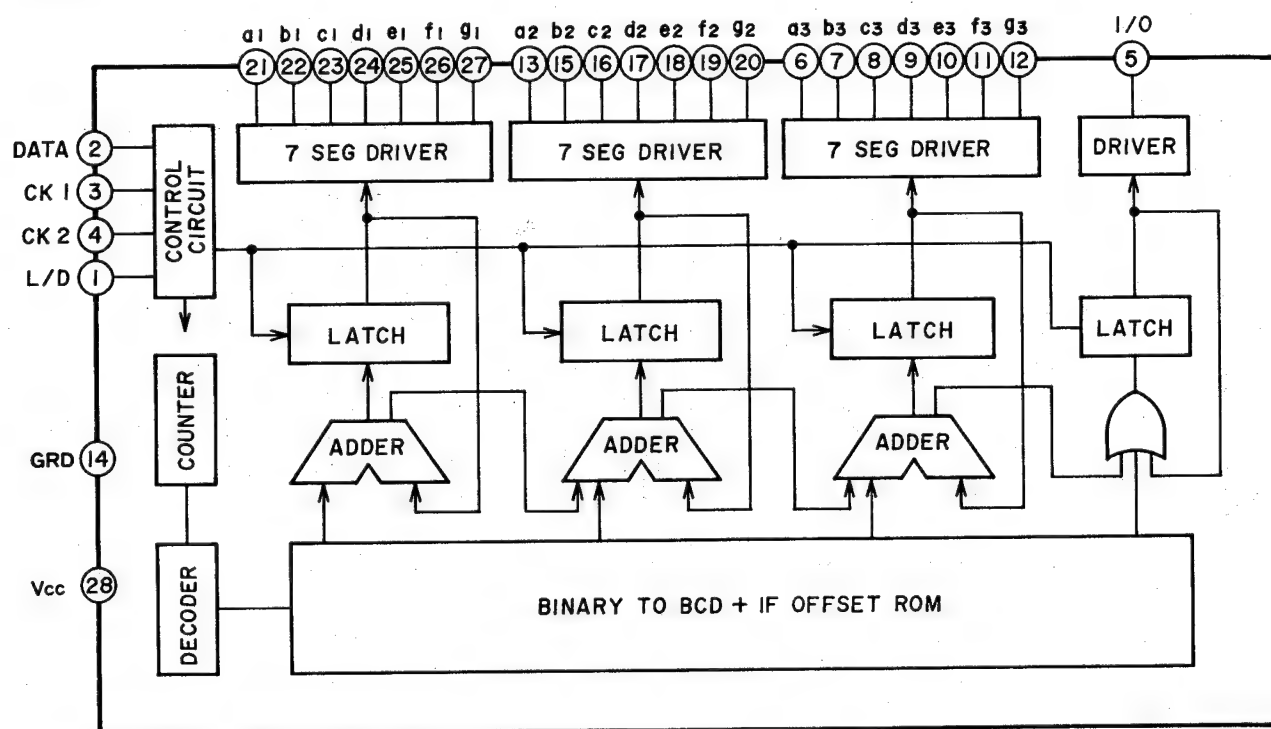
| Pin No. | Symbol | Meaning | Function |
|---------|--------|--|---|
| 1 | GND | Ground | |
| 2 | XT | X-TAL OSC Terminals | Input Terminal of Standard Frequency OSC (X-TAL: 7.2MHz) |
| 3 | XT | | |
| 4 | FM | | |
| 5 | MW | FM Band Designation Input | Band Selector |
| 6 | LW | MW Band Designation Input | |
| 7 | Manual | LW Band Designation Input | |
| 8 | Auto | Manual Tuning Mode | Manual/Auto Tuning Selector |
| 9 | UP | Auto Tuning Mode | |
| 10 | Down | UP Operation Key Input | UP/DOWN Tuning Selector |
| 11 | STO | Down Operation Key Input | |
| 12 | M1 | Memory Store Command Input | Memory at preset memory operation |
| 19 | M8 | Random Access for 16-Preset-Memory with the inputs of MC1/MC2 | |
| 20 | MC1 | Channel Designation Inputs | 8 Stations (FM/AM) |
| 21 | MC2 | Memory Control Input | |
| 22 | OSC2 | 16 Stations (FM + MW + LW) | Preset Memory Selector |
| 23 | OSC1 | CR Connector Terminal for AM Search Scan Speed | |
| 24 | O/5 | CR Connection Terminal for FM Search Scan Speed | Level "H" Output for 50kHz Step (S. Africa and Europe area) |
| 25 | CK2 | Supply Serial Data & Timing Clock to TD6301AP (Receiving Frequency Digital Display Driver) | |
| 26 | CK1 | CK1 Also supplies "PEE" sound Output Signal | Muting Signal Output |
| 27 | Data | Level "H" Output when Muting | |
| 28 | Mute | Area Designation Input | Area Selector (Japan, US, Europe, S. Africa) |
| 29 | E2 | Not used (Connected to VDD terminal to avoid the malfunction by noise) | |
| 30 | E1 | Stops Auto Search at Level "H" while Level "H" at Stop 1 | 1/2 Speed-Down of Auto Search at Level "H" |
| 31 | Stop 3 | Scan Speed Slow-Down Input | |
| 32 | Stop 2 | Phase Comparator Output | Phase Comparator Output |
| 33 | Stop 1 | Phase Comparator Output | |
| 34 | DO-2 | Test Terminal | Test Mode at Level "H" |
| 35 | DO-1 | Connected to Prescaler (TD6104P) Output | |
| 36 | Test | Count-Down (1/30, 1/32) Designation Out-put for Prescaler | AM Local OSC Signal Input |
| 37 | FM in | AM Programable Counter Input | |
| 38 | PSC | Initialize at Level "H" | Initialize at Level "L" |
| 39 | AM in | Initialize at Level "H" | |
| 40 | INH | Initialize at Level "L" | +5V is supplied |
| 41 | INT | Power Terminal | |
| 42 | VDD | | |

TD6104P



| Pin No. | Symbol | Description |
|---------|----------|--|
| 1 | Vcc | +5V |
| 2 | OUT-2 | Inverted output of OUT-1 |
| 3 | OUT-1 | Count-Down Frequency Output ($f_{in}/30$ or $f_{in}/32$) |
| 4 | GND | Ground |
| 5 | f_{in} | FM Local OSC Input |
| 6 | C | Bypass capacitor terminal for bias circuit |
| 7 | PSC | Count-Down-Ratio Switch Signal Input 1/32 at $V_{psc} \geq 2V$ 1/30 at $V_{psc} \leq 1V$ |

TD6301P



TD6301AP

| Pin No. | Symbol | Description |
|--------------------------|---------------|---|
| 1 | L/D | Output Select Signal Input Terminal (To change the output for various display such as LED, FLD & LCD) |
| 2 | Data | Receiving Frequency Data Input Terminal (Serial Input from System Controller LSI) |
| 3 | CK1 | Control Timing Input Terminal for Receiving Frequency Data Input (Simultaneously W/Data from System Controller LSI) |
| 4 | CK2 | |
| 5 | 1/0 | Segment Driver Output Terminal for: FM: 100 ^s MHz AM: 1000 ^s kHz |
| 6 } 12 | a3 } g3 | 7 Segment Driver Output Terminals for: FM: 10 ^s MHz AM: 100 ^s kHz |
| 13 } 15 } 20 | a2 } g2 | 7 Segment Driver Output Terminals for: FM: 1 ^s MHz AM: 10 ^s kHz |
| 21 } 27 | a1 } g1 | 7 Segment Driver Output Terminals for: FM: 100 ^s kHz AM: 1 ^s kHz |
| 14 | VCC | +5V |
| 28 | GND | Ground |

64. FM PLL SYNTHESIZER (MODEL AT-M5/L, AT-M5L/FR)

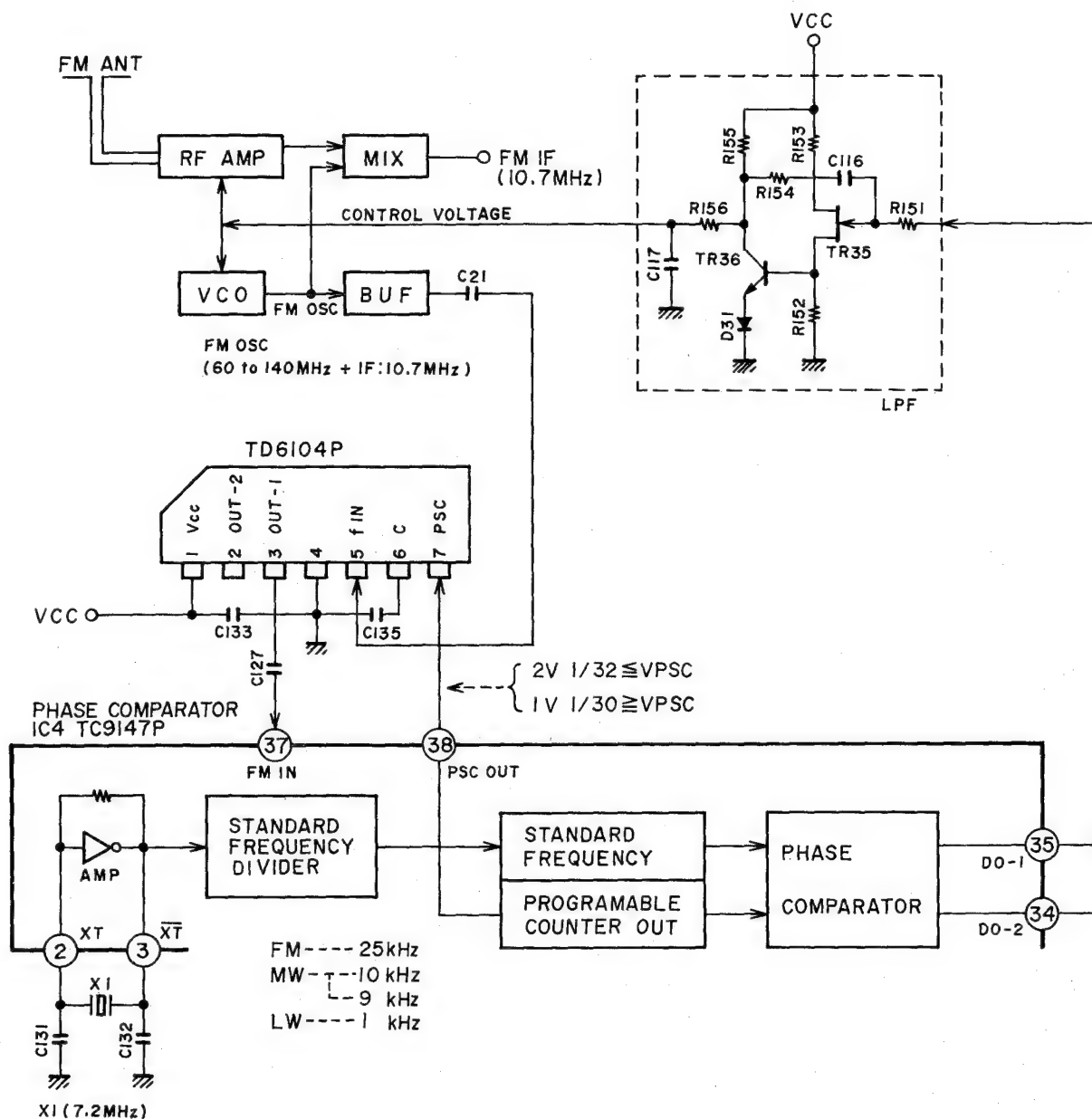


Fig. 6-4

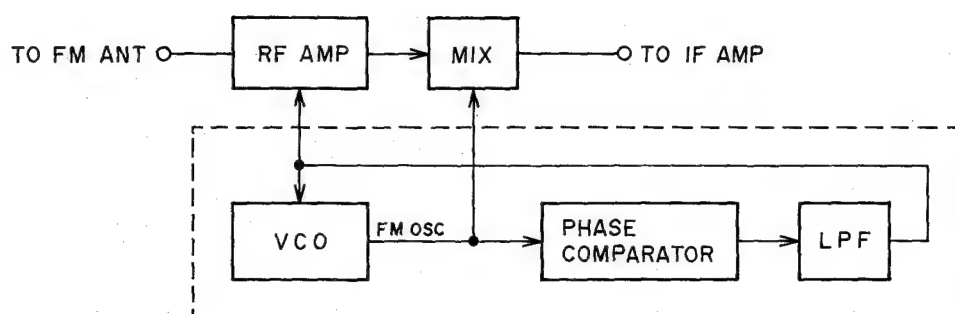


Fig. 6-5 PLL Basic Structure

6-5. AM TUNING AND AM VCO CIRCUIT

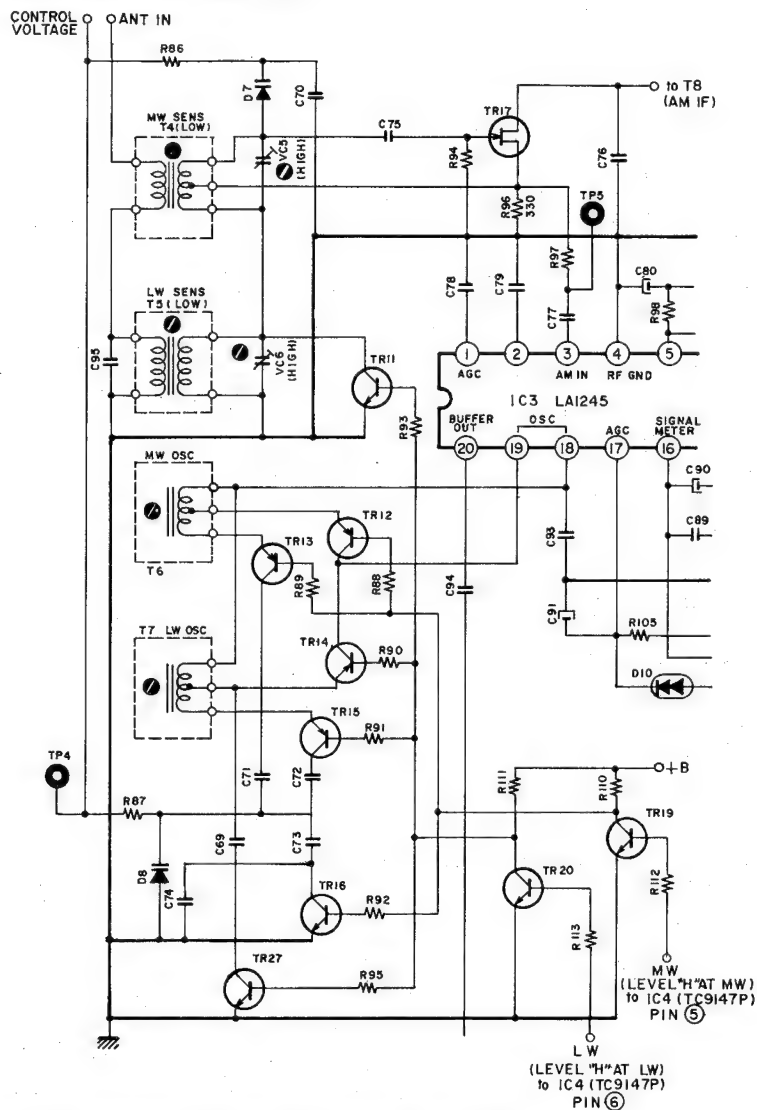


Fig. 6-6

6-5-1. AM TUNING CIRCUIT (MODEL AT-M5L) (Refer to Fig. 6-6)

- 1) For MW, the pin ⑥ of IC4 is at "L" level, and so TR20 is OFF, and TR11 is ON; i.e. T5 and VC6 are effectively short circuited and only T4 and VC5 are effectively connected to TR17.
- 2) For LW, the pin ⑥ of IC4 is at "H" level, and so TR20 is ON and TR11 is OFF, and T5 and VC6 are connected through T4 and VC5 to TR17.

6-5-2. AM VCO CIRCUIT (Refer to Fig. 6-6, 7, 8)

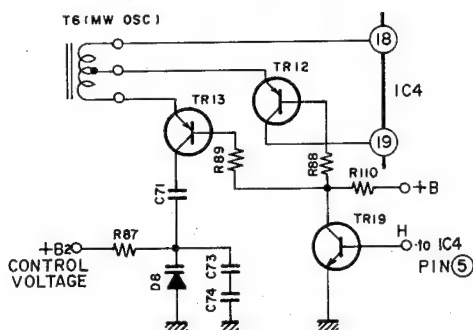


Fig. 6-7 MW OSC

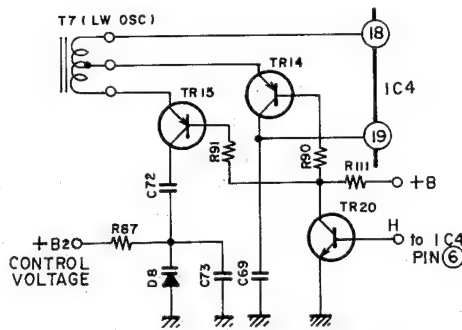


Fig. 6-8 LW OSC

- 1) For MW, the pin ⑤ of IC4 is at "H" level, and so TR19 is ON, TR16 OFF, TR12 and TR13 ON, TR20 is OFF and so TR14 and T15 are OFF. This means that T6, C71, C73, C74 and D8 are connected through TR19; TR12 and TR13, to create the MW OSC state (refer to Fig. 6-7).
- 2) For LW, the pin ⑥ of IC4 is at "H" level and the reverse operation to Paragraph 1 is conducted. This means T7, C69, C72, C73 and D8 are connected to create the LW OSC state (refer to Fig. 6-8).

6-6. AUTO TUNING (Refer to Fig. 6-9)

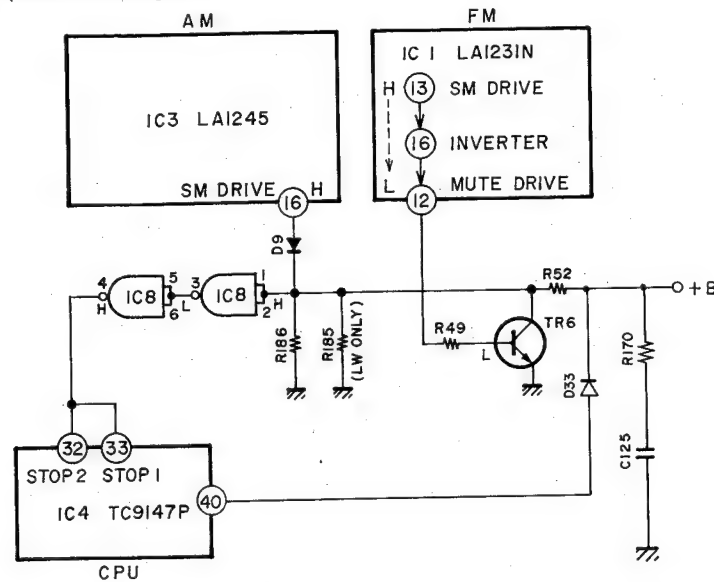


Fig. 6-9 Auto Stop Signal

6-6-1. When the tuning mode is set AUTO and the UP/DOWN SCAN is pressed, this feature searches automatically through the broadcasting frequency range and stops, when a station is detected.

6-6-2. For FM, the trailing edge of the voltage at the pin ⑫ of IC1 (LA1231N) is detected as the auto stop signal, and for AM the leading edge of the voltage at the pin ⑯ of IC3 (LA1245) is detected.

6-6-3. The auto-search tuning is released in any of the following 4 ways.

1. When switched to manual scan mode

2. When band is changed

3. When reading of the preset memory is started

4. When switched to inhibit mode

The inhibit mode means that the pin ④ of IC4 (TC9147P) is at "L" level (usually "H").

6-6-4. When the tuning mode is manual, a 1 push/1 step tuning system operates, but when the UP/DOWN SW is continuously pressed, the manual fast tuning mode is created. The tuning speed, as in the case of auto tuning, is determined by C128/R177 and C129/R178 connected to IC4 (TC9147P) ②② OSC 2 (for AM) and ②③ OSC1 (for FM) respectively.

6-7. CPU IC4 (TC9147P) BACK-UP (Refer to Fig. 6-10)

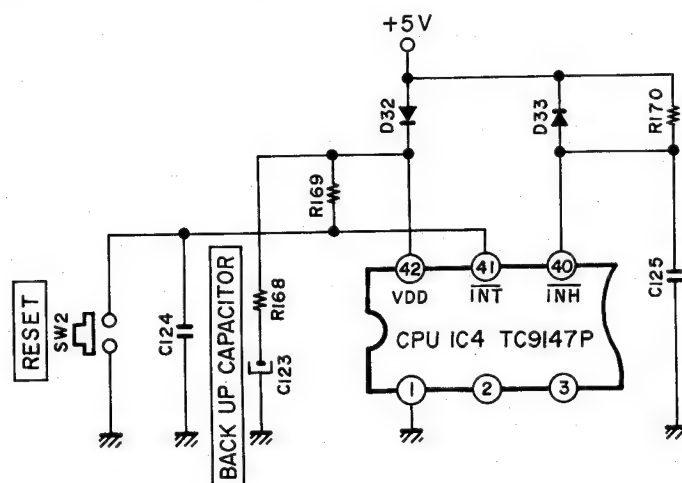


Fig. 6-10

For the back-up power source, a capacitor (C123) called "super capacitor" is used and it can provide a voltage back-up for about 2 weeks. (when C123 is 0.047F, 0.5-1V)

However, when the voltage drops below that value, the power ON does not reset smoothly and causes malfunction. In order to reset in such a case, a Reset SW is

provided on the rear panel. When the CPU is not backed-up, the reset circuit operates to initialize the IC internal circuitry so that the display will be:

FM 76.00 MHz (AT-M5 J only)

FM 87.50 MHz (other models)

and the external SW will be in FM-AUTO and SCAN-MANUAL.

6-8. MUTE CIRCUIT (Refer to Fig. 6-11)

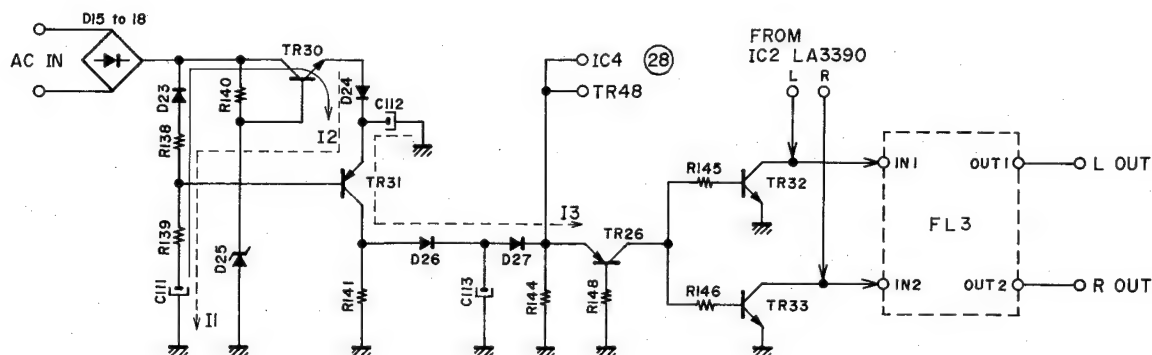


Fig. 6-11

1) The mute state is created in three ways; i.e. when power is turned ON/OFF, or when the signals from MICOM (IC4) Pin(28) or from TR48 become "H" level.

2) When the power is turned ON, the charging current I1 flows. Until the charging of C111 and C112 is completed, TR30-33 remain ON, so that the final signal output is shorted or muted by using the leading edge of the voltage when the power is turned ON.

When the power is turned OFF, C111 and C112 are

discharged by the discharging currents (I2, I3). Until the discharging is completed TR30-33 remain ON, and as in the above case, the mute operates (within 3 seconds).

3) When the band is changed (0.5 - 1.5 seconds) and during the scan tuning, the pin (28) of IC4 becomes "H" level and when the mode is changed, the collector of TR48 becomes "H" level, so that the mute also operates in these two cases.

6-9. MODE SW (FM AUTO/MONO) (Refer to Fig. 6-12)

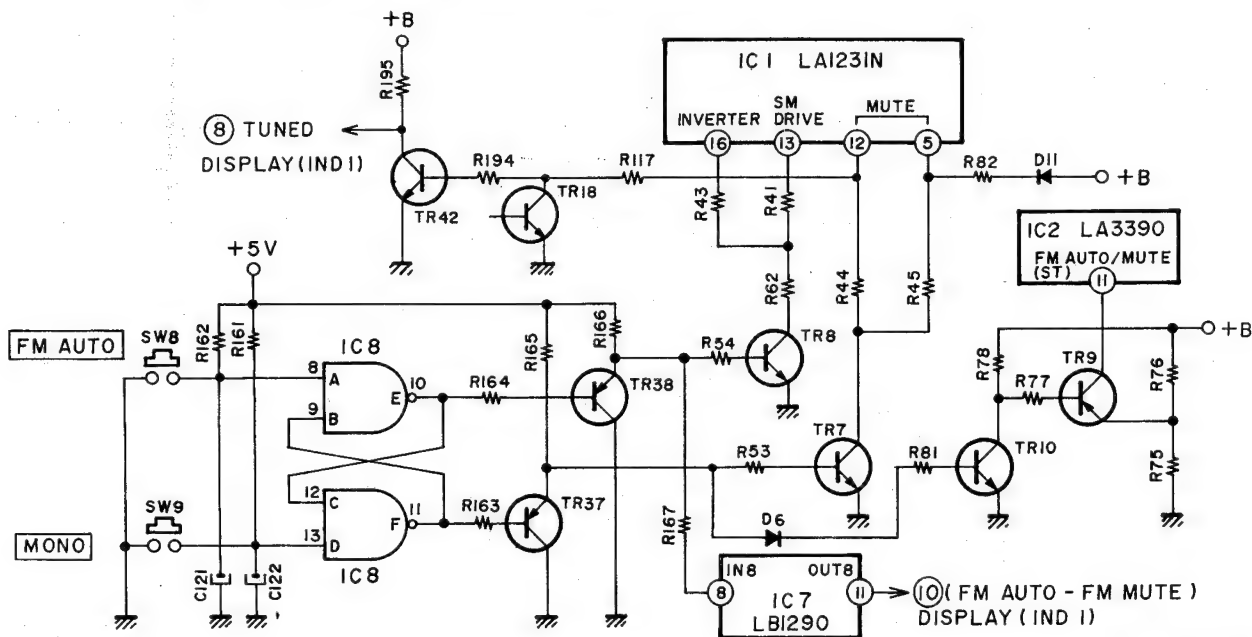


Fig. 6-12

1) In initial state or when the power is turned ON, the input of IC8 is A="H", B="L", C="H" and D="H", and the output is E="H" and F="L". Therefore, TR37 is ON, TR7 OFF, the pin (5) of IC1 is "H" and the mute control is available. Secondly TR10 and TR9 are OFF and the pin (11) of IC2 is "L", so instead of forced mono, FM AUTO (stereo) mode is created. Thirdly, TR38 becomes OFF, and so the pin (8) of IC7 is "H" and the pin (11) is also "H", and the FM AUTO-FM MUTE connected to the pin (10) of the display (IND1) lights.

2) When in MONO mode (SW9 ON), the input of IC8 is A="H", B="H", C="L" and D="L", and the output is E="L", and F="H". Therefore, TR38 is ON, the pin (8) of IC7 is "L", the pin (11) also "L", and the FM AUTO-FM MUTE goes out. Secondly, TR37 is OFF, TR7 ON, the pin (5) of IC1 is "L" so that there is no mute control. Thirdly TR10 and TR9 are ON, and so the pin (11) of IC2 becomes "H" and the forced MONO state is created.

*TR8 is a transistor for determining the scan stop level when in FM AUTO.

VII. ELECTRICAL ADJUSTMENT

7-1. THE INSTRUMENT CONNECTIONS

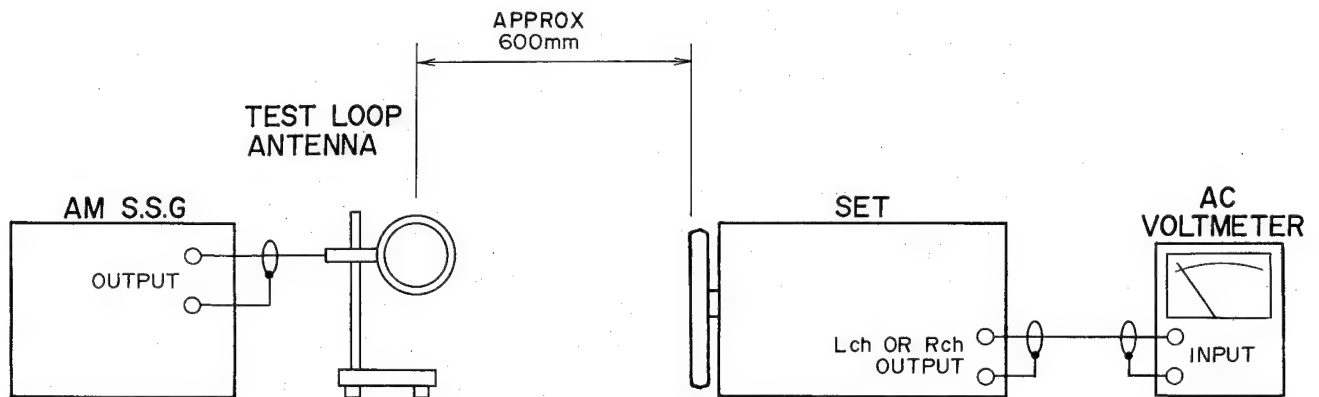


Fig. 7-1 Instrument Connections for AM (MW, LW) Section Adjustment

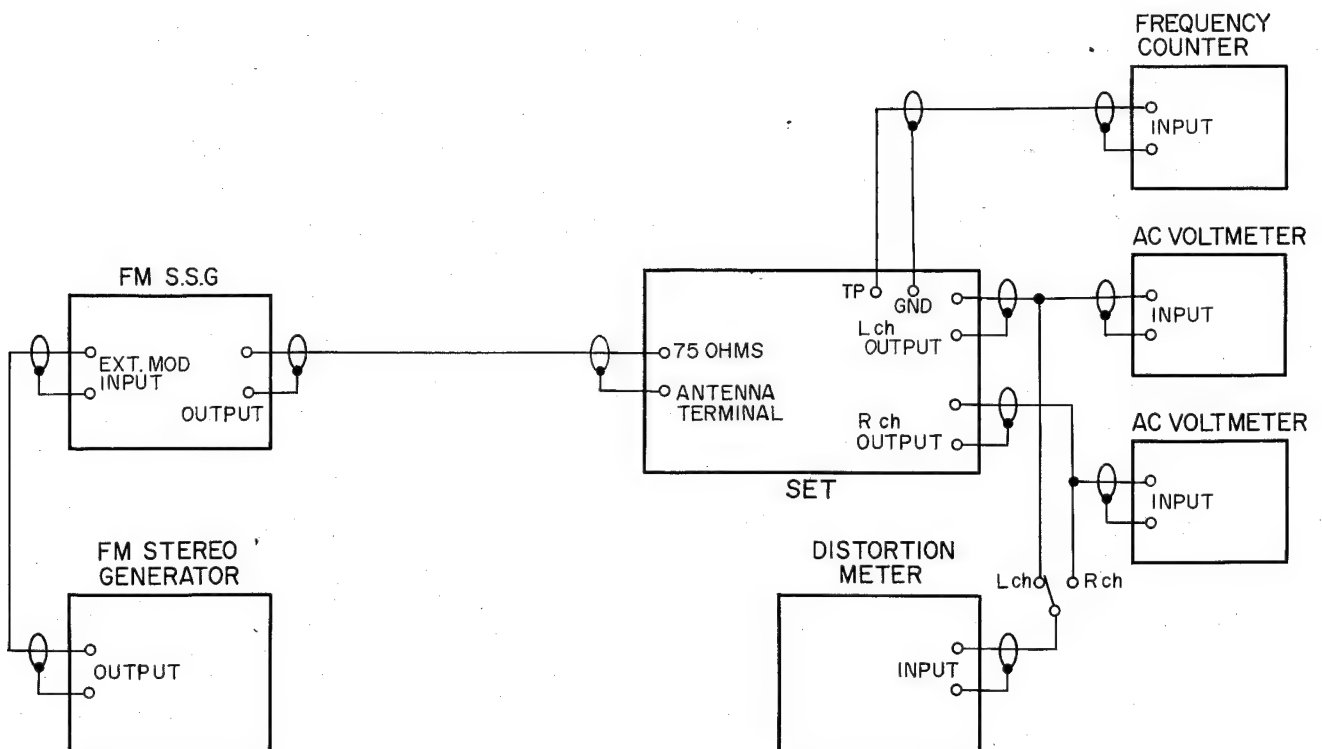


Fig. 7-2 Instrument Connections for FM Section Adjustment

7-2. THE VIEW OF ADJUSTMENT POINTS

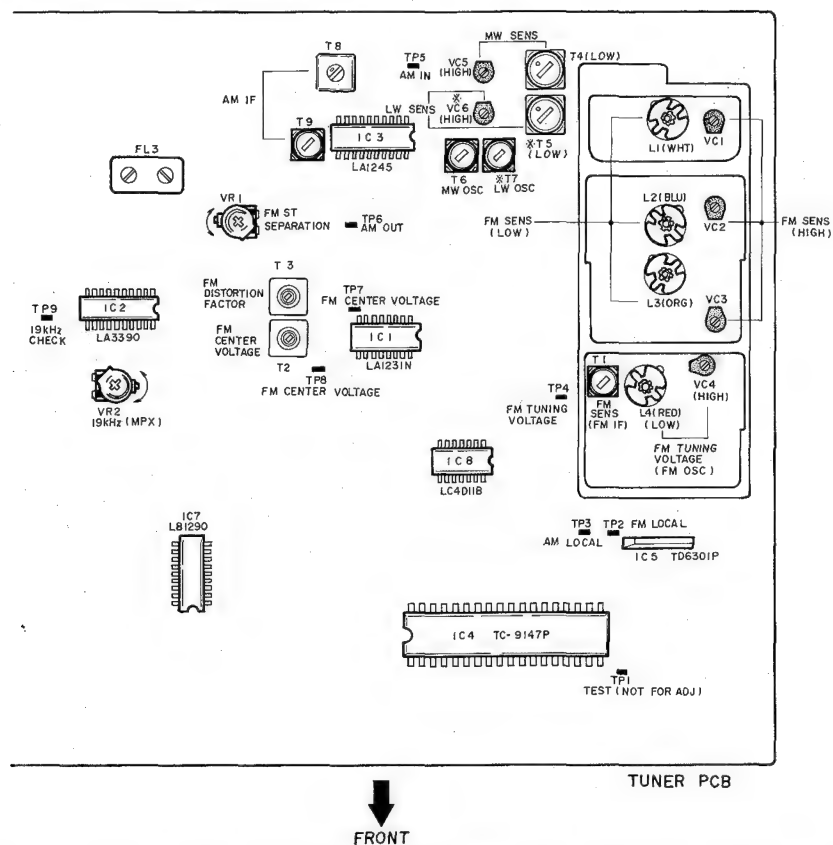


Fig. 7-3 Tuner P.C.B. (Model AT-M5/L)(T5, T7, VC-6 are deleted on Model AT-M5.)

7-3. MW AND LW SECTION ADJUSTMENT (Refer to Figs. 7-1, 3)

| Step | Adjustment Item | Adjustment Point | Test Point | Result | Remarks |
|------|------------------------|------------------|------------|---|--|
| 1 | MW OSC | T6 | TP3 TP4 | 2±0.01V (522kHz) Less than 25V (1611kHz) | Selector to MW Frequency counter to TP3. Volt Meter to TP4 |
| 2 | AM IF | T8, 9 | Output | Maximum output | 1000kHz (999kHz), 50dB, 400Hz (30%) Input |
| 3 | Low Range Sensitivity | T4 | Output | Maximum output Less than 10% distortion factor | 600kHz (603kHz), 60dB, 400Hz (30%) Input |
| 4 | High Range Sensitivity | VC5 | Output | Maximum output Less than 10% distortion factor | 1400kHz (1404kHz), 60dB, 400Hz (30%) Input |
| 5 | LW OSC | T7 | TP3 TP4 | 2±0.01V (153kHz) Less than 25V (360kHz) | Selector to LW Frequency counter to TP3. Volt Meter to TP4 |
| 6 | Low Range Sensitivity | T5 | Output | Maximum output Less than 10% distortion factor | 164kHz, 65dB, 400Hz (30%) Input |
| 7 | High Range Sensitivity | VC6 | Output | Maximum output Less than 10% distortion factor | 299kHz, 65dB, 400Hz (30%) Input |

NOTE: 1. For the best result, repeat step 1 through 7 for two or three times.
2. (kHz) in remarks indicates the test frequency for AM 9kHz step area.

7-4. FM SECTION ADJUSTMENT (Refer to Figs. 7-2, 3)

| Step | Adjustment Item | Adjustment Point | Test Point | Result | Remarks |
|------|----------------------------|------------------|------------|----------------------------------|--|
| 1 | FM Tuning Voltage (Low) | L4 | TP4 | 3.0V | Selector to FM, Display to 88MHz, Digital Volt Meter Between TP4 & GND. |
| 2 | FM Tuning Voltage (High) | VC4 | TP4 | 20V | Display to 108MHz |
| 3 | Low Range Sensitivity | L1, 2, 3 T1 | Output | Less than 6dB | Mode to Mono. 88MHz, 1kHz (Mono, 100%) Input, 3% DISTORTION FACTOR |
| 4 | High Range Sensitivity | VC1, 2, 3 | Output | Less than 6dB | 108MHz, 1kHz (Mono, 100%) Input, 3% DISTORTION FACTOR |
| 5 | FM Center Voltage | T2 | TP7 TP8 | Centered Tuning Meter Indication | Center Tuning Meter Between TP7 & TP8, (see NOTE 1) Tunes only noise without interference from Broadcasting |
| 6 | Distortion Factor | T3 | Output | Less than 0.3% | 98MHz, 60dB, 1kHz (Mono, 100%) Input |
| 7 | MPX Free Running Frequency | VR2 | TP9 | 19kHz±50Hz | Mode SW to FM Auto, Frequency counter to TP9, 98MHz Non-Modulation Signal Input |
| 8 | Stereo Separation | VR1 | Output | More than 40dB | 98MHz, 60dB, 1kHz (Stereo, 100%) LCH (RCH) Input, RCH (LCH) output to Minimum |

- NOTE: 1. The center tuning meter such as the ones used on model AA-R20, 30, 40, 50 & AT-2400, 2600 can be used for this adjustment.
If it is not available, use a digital meter (DC VOLTAGE, RANGE 20V) instead, and adjust T2 so that it indicates 0V at the same condition.
2. For the best result, repeat step 1 through 8 for two or three times.

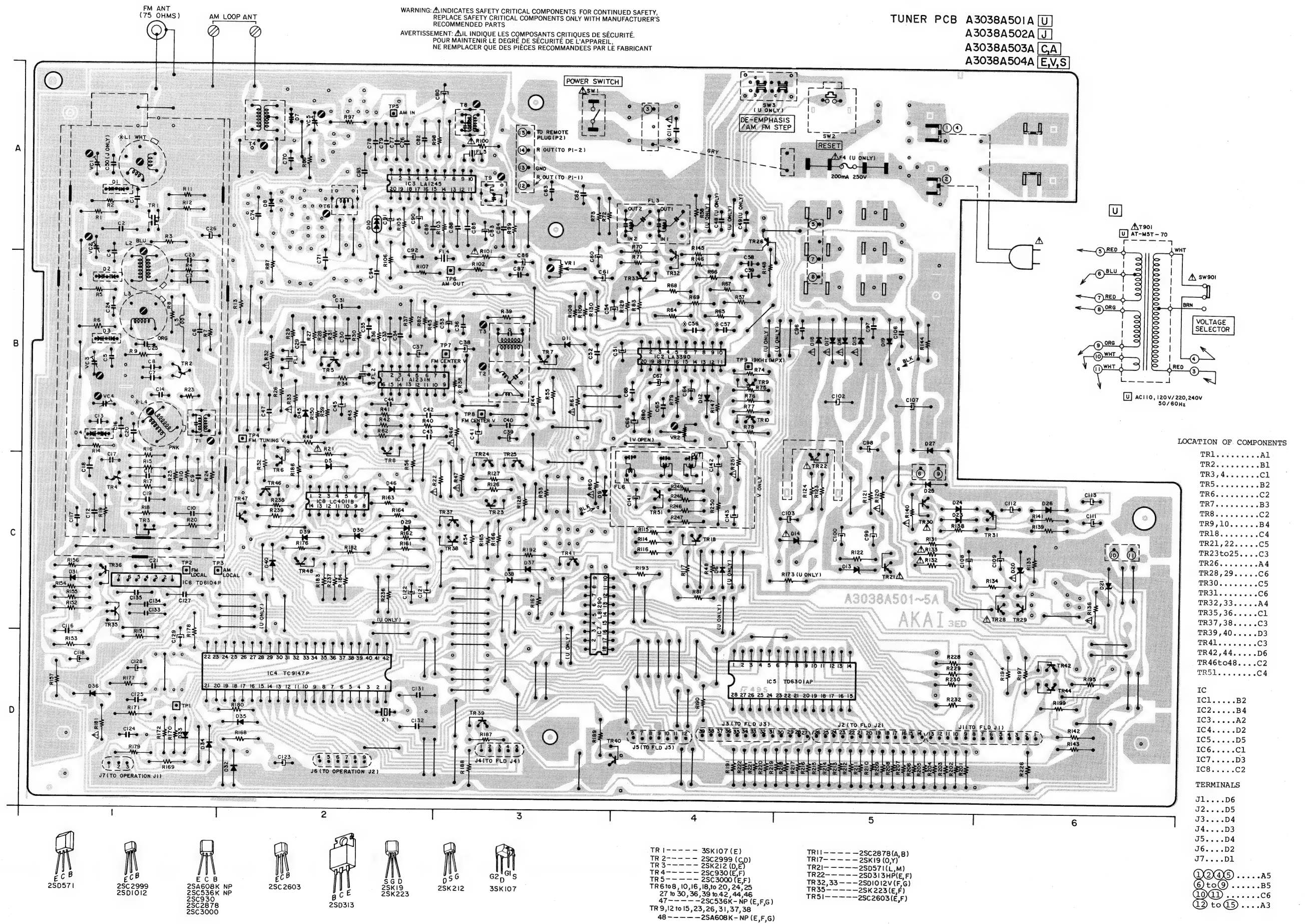
VIII. CLASSIFICATION OF VARIOUS P.C BOARDS

8-1. MODEL AT-M5/L, M5L/FR P.C BOARD TITLES AND IDENTIFICATION NUMBERS

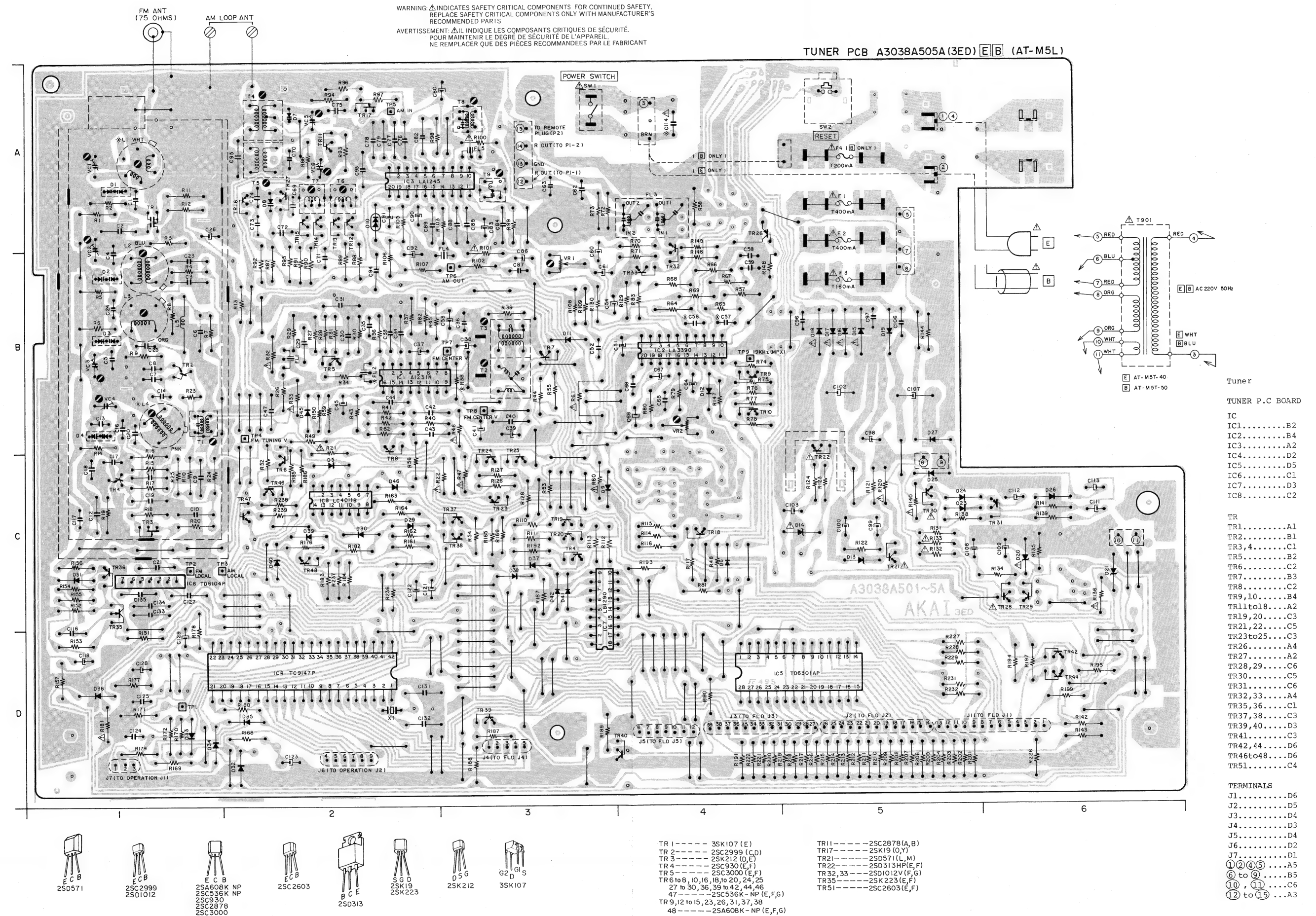
| P.C BOARD TYTLE | P.C BOARD NUMBER | REMARKS |
|-----------------|------------------|-----------------|
| TUNER | A3038A501A | U (AT-M5) |
| TUNER | A3038A502A | J (AT-M5) |
| TUNER | A3038A503A | C, A (AT-M5) |
| TUNER | A3038A504A | E, V, S (AT-M5) |
| TUNER | A3038A505A | E, B (AT-M5L) |
| OPERATION | A3038A501B | U (AT-M5) |
| OPERATION | A3038A502B | J (AT-M5) |
| OPERATION | A3038A503B | C, A (AT-M5) |
| OPERATION | A3038A504B | E, V, S (AT-M5) |
| OPERATION | A3038A505B | E, B (AT-M5L) |
| FLD | A3038A501C | U (AT-M5) |
| FLD | A3038A502C | J (AT-M5) |
| FLD | A3038A503C | C, A (AT-M5) |
| FLD | A3038A504C | E, V, S (AT-M5) |
| FLD | A3038A505C | E, B (AT-M5L) |

8-2. COMPOSITION OF VARIOUS P.C BOARDS

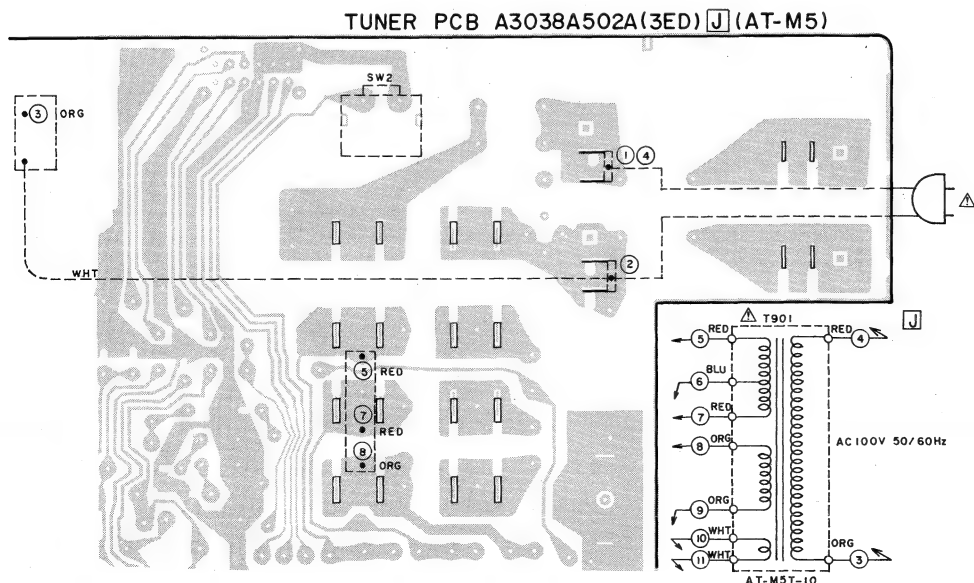
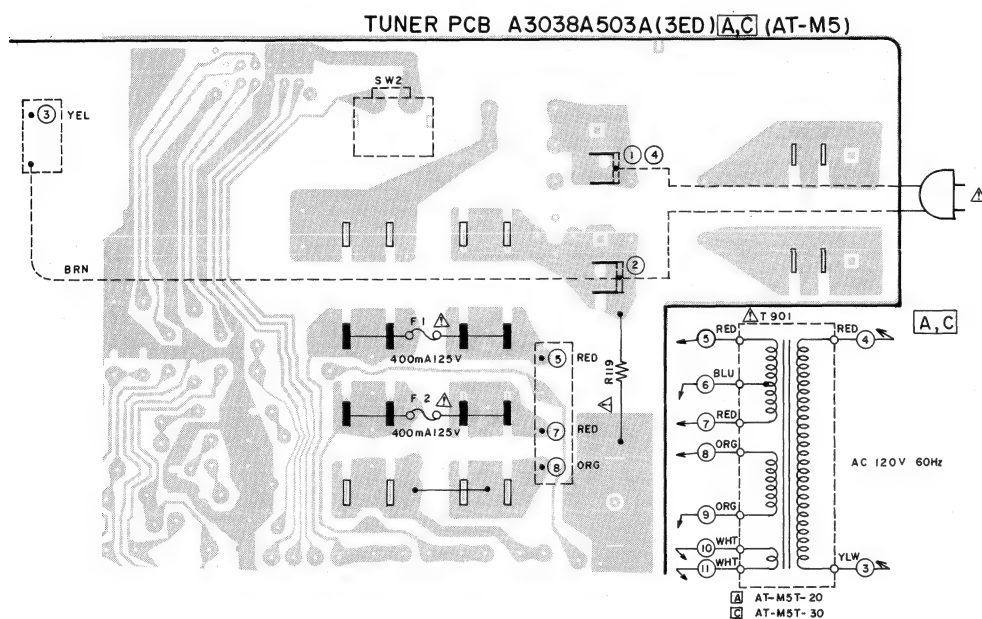
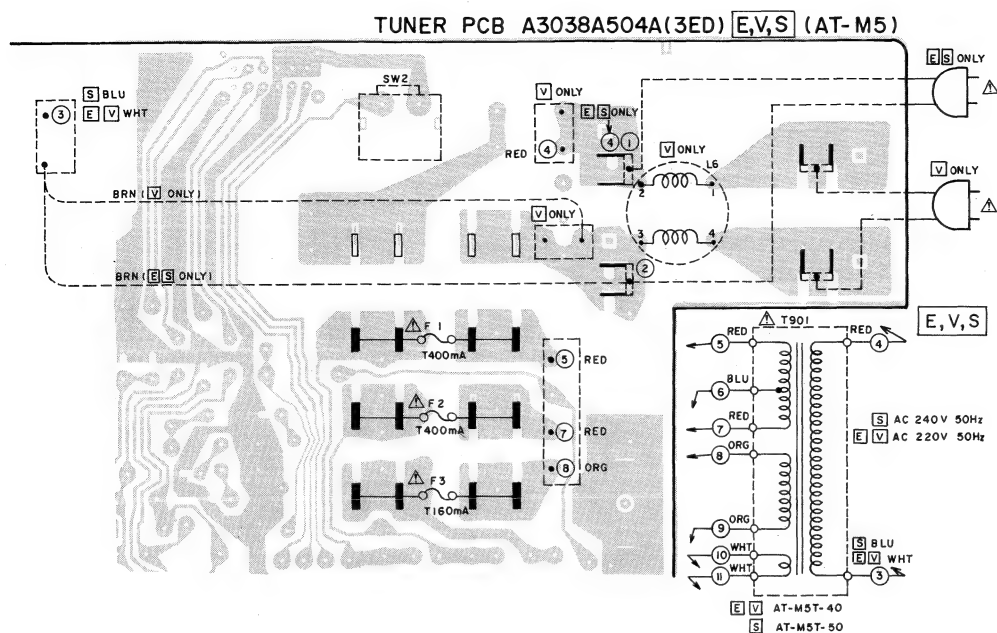
1) TUNER P.C BOARD A3038A501A~504A (AT-M5)



2) TUNER P.C BOARD A3038A505A (AT-M5L)

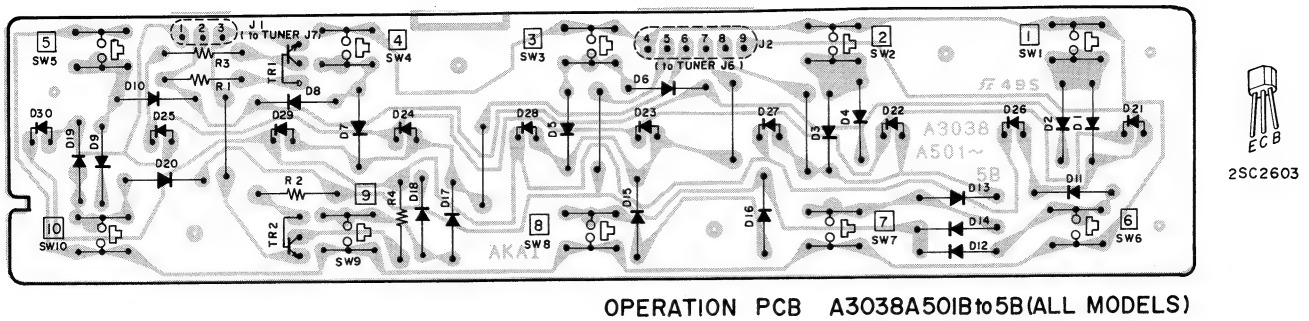


3) TUNER P.C BOARD POWER SUPPLY SECTION ONLY (J, CA, EVS)

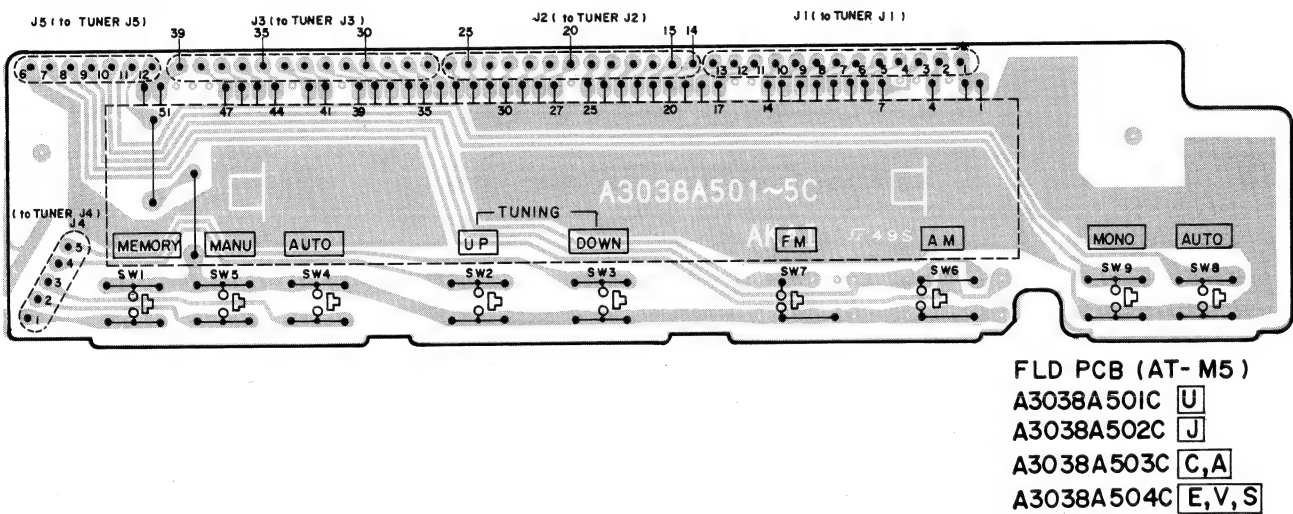


WARNING: **Δ** INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: **Δ** IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

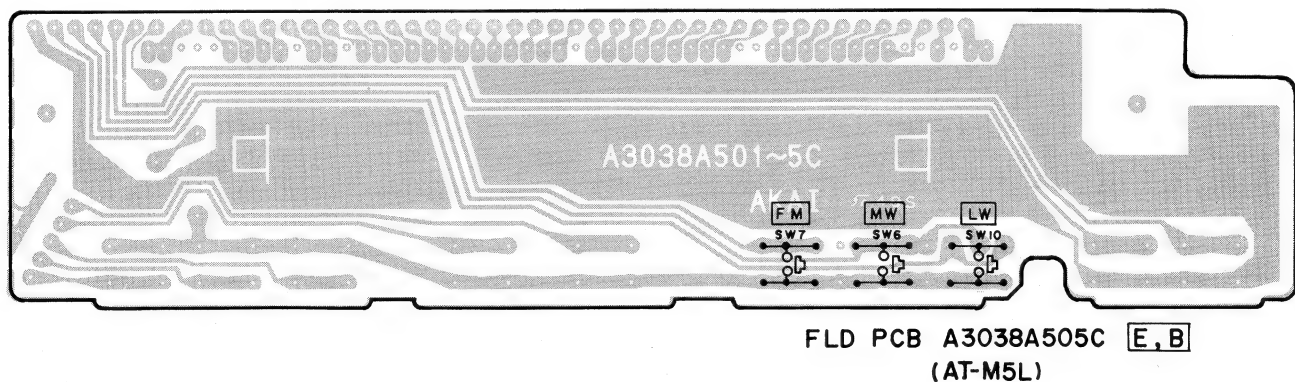
4) OPERATION P.C BOARD A3038A501B~ 505B



5) FLD P.C BOARD A3038A501C~ 504C (AT-M5)



6) FLD P.C BOARD A3038A505C (AT-M5L)



SECTION 2

CIRCUIT OPERATION DESCRIPTION

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I. OUTLINE OF AM-M5 AND AM-M7

AM-M5/M7 use a microcomputer (AA-100) to control the system operation, and all the functions (input select, volume, tone control, etc.) which have been provided by mechanical means so far, are now executed electronically.

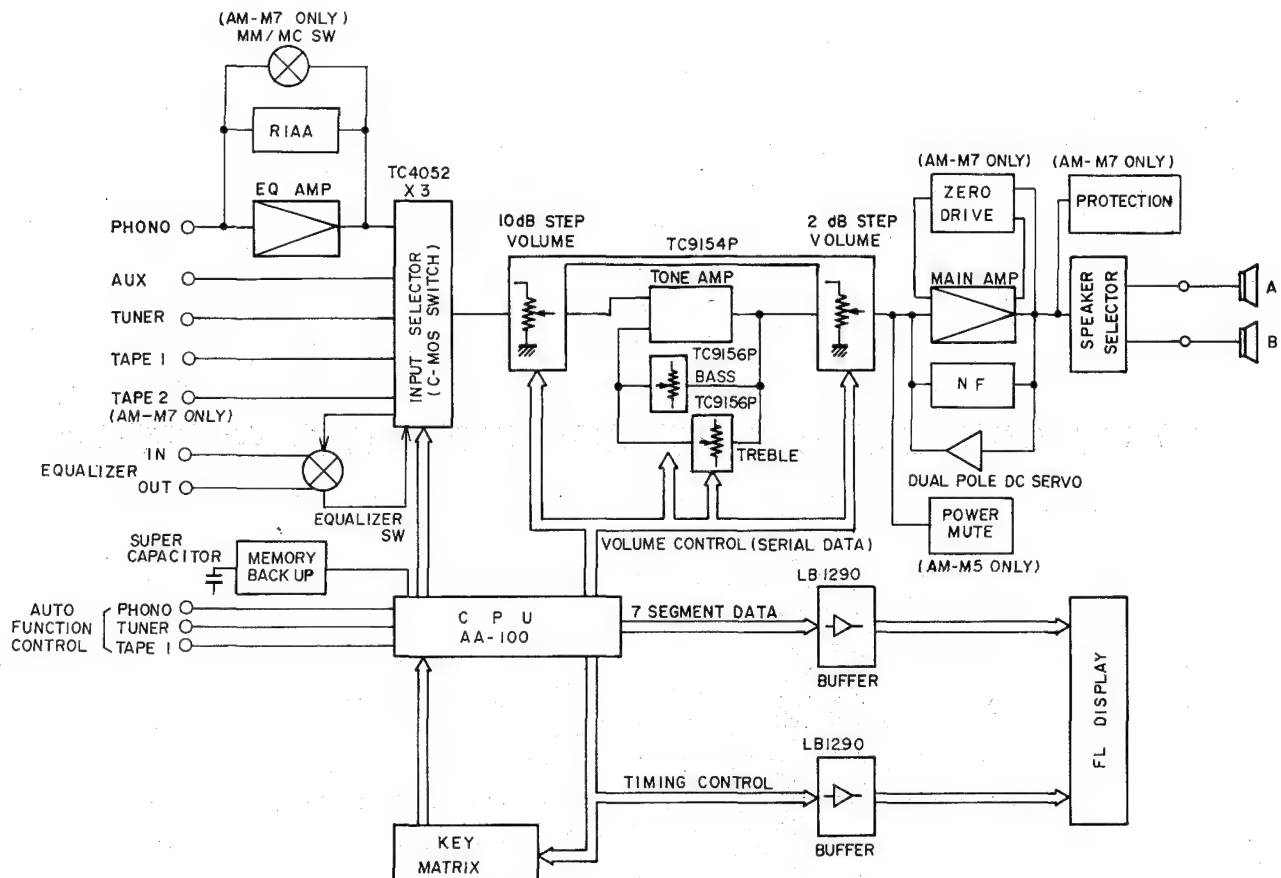


Fig. 1-1 Block Diagram of AM-M5/M7

1-1. SELECTION OF INPUT SIGNAL

In accordance with the buttons, PHONO, BAND, AUX, TAPE 1 and TAPE 2, AA-100 controls the C-MOS analog switch (TC4052x3) to select the appropriate analog signal.

1-2. VOLUME CONTROL

AA-100 transfers serially the level data corresponding to the UP or DOWN action to the volume IC to change the volume level.

1-3. LONG-TERM BACK-UP BY CAPACITOR

AA-100 micro-computers for C-MOS processing, have very low current consumption in hold mode, thus enabling long-term back-up by a capacitor to be realized. This provides the last-setting memory which maintains the prior status when the power is OFF. However the volume position will be reset at -26 dB in order to protect the speaker for the case where the power went off at a volume level higher than the prescribed level of -26 dB.

1-4. GRAPHIC EQUALIZER TERMINAL

The AKAI Graphic Equalizer EA-M7 can be connected directly to the Jacks provided exclusively for an equalizer.

1-5. AUTO FUNCTION CONTROL SYSTEM

When you use the Akai AM-M7 in combination with the Akai Player system AP-M7 or AP-M5, the Akai Stereo cassette Deck HX-M7R or HX-M5 and the Akai Quartz Synthesizer Tuner AT-M5/L, you can enjoy the convenient auto function control. Just by depressing the operating button of each component, the Akai AM-M7's input source selector will be set automatically. The auto function control inside each component sends a control signal to the Akai AM-M7 which is then detected by a micro-computer. This micro-computer then sets the Akai AM-M7's input source selector to whichever signal is detected. Therefore, you can switch from tape playback to record playback or radio reception without touching the Akai AM-M7's input source selector. AM-M5 operates in the same way.

* Auto function control does not function for components connected to the AUX and TAPE 2 jacks on AM-M7.

SECTION 2

CIRCUIT OPERATION DESCRIPTION

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II. OPERATION OF CONTROL IC AA-100 PERIPHERAL CIRCUIT

2-1. AA-100 PERIPHERAL BLOCK DIAGRAM

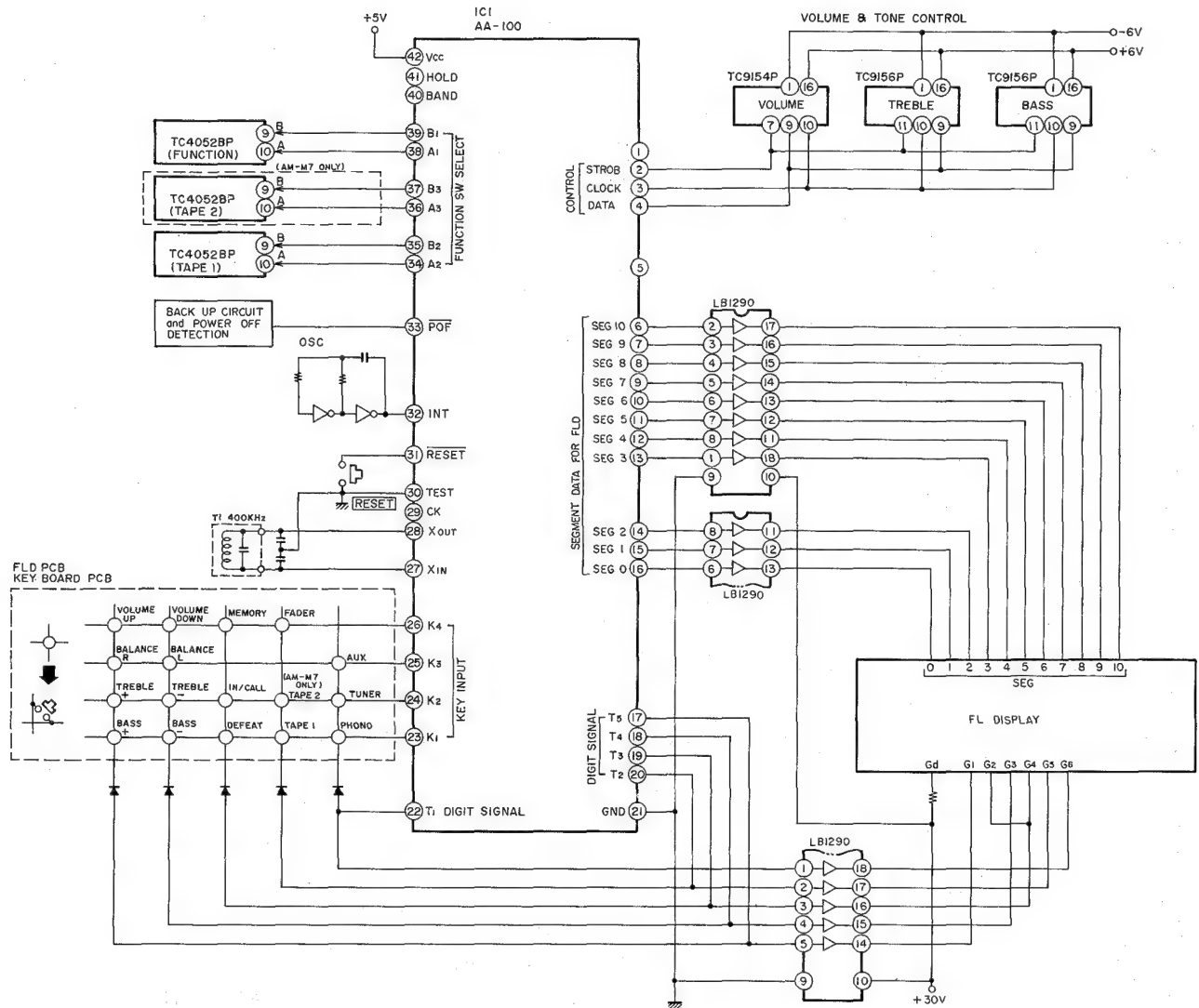


Fig. 2-1

2-2. AA-100 TERMINALS DESCRIPTION

| No. | Terminal Description | Function |
|-----|----------------------|---|
| 1 | NC | |
| 2 | STROB | Output Control Signal for Elect. VR and TONE Output at ACTIVE "H" |
| 3 | CLOCK | |
| 4 | DATA | |
| 5 | CART (SEG11) | Output "H" when phono |
| 6 | SEG10 | SEGMENT DATA for Display Output at ACTIVE "H" |
| 7 | SEG9 | |
| 8 | SEG8 | |
| 9 | SEG7 | |
| 10 | SEG6 | |
| 11 | SEG5 | |
| 12 | SEG4 | |
| 13 | SEG3 | |
| 14 | SEG2 | |
| 15 | SEG1 | |
| 16 | SEG0 | |
| 17 | T5 | DIGIT Signal Output at ACTIVE "H" |
| 18 | T4 | |
| 19 | T3 | |
| 20 | T2 | |
| 21 | GND | DIGIT Signal |
| 22 | T1 | |
| 23 | K1 | KEY Input Input at ACTIVE "H" |
| 24 | K2 | |
| 25 | K3 | |
| 26 | K4 | |
| 27 | X _{IN} | Clock OSC Coil |
| 28 | X _{OUT} | |
| 29 | CK | unused |
| 30 | TEST | unused |
| 31 | RESET | Reset at ACTIVE "L" |
| 32 | INT | Interrupt Signal |
| 33 | POF | Power OFF at ACTIVE "H" |
| 34 | A2 | FUNCTION SW Select Signal (B1, A1) TUNER, PHONO, AUX (B2, A2) Tape 1 (B3, A3) Tape 2 Output at ACTIVE "H" |
| 35 | B2 | |
| 36 | A3 | |
| 37 | B3 | |
| 38 | A1 | |
| 39 | B1 | |
| 40 | BAND | |
| 41 | HOLD | |
| 42 | Vcc | +5V |

2-3. OPERATION OF AMPLIFIER SECTION CONTROL IC AA-100 PERIPHERAL CIRCUIT

2-3-1. Display Data

2-3-2. Digit Output of AA-100

2-3-3. Description of Input Selector

- 1) FUNCTION SWITCHING
- 2) TAPE MONITOR SWITCHING

2-3-4. Operation of Electronic Volume Control and Tone Control

- 1) OPERATION OF VOLUME CONTROL
- 2) SERIAL TRANSFER DATA

2-3-5. Composition of Volume IC TC9154P and Tone Control (Bass Treble) IC TC9156P

- 1) INTERNAL BLOCK DIAGRAM
- 2) ATTENUATOR OF TC9154P
- 3) INTERNAL BLOCK DIAGRAM OF TC9156P (BASS TREBLE)
- 4) VARIABLE RESISTOR OF TC9156P
- 5) OPERATION
- 6) UP/DOWN OPERATION OF VOLUME CONTROL
- 8) UP/DOWN OPERATION OF BASS AND TREBLE
- 9) BALANCE CONTROL
- 10) OPERATION OF FADER

2-3-6. The Status that will be Established When Reset Button is Pressed

2-3-7. Reset Status when Power is on

2-3-8. How to make Letters

*For the description of the above circuit which is identical to Model AA-R22/32/42, see the service manual for AA-22/32/42.

III. MAIN AMPLIFIER

3-1. AKAI ZERO DRIVE CIRCUIT (AM-M7 ONLY)

3-2. DUAL POLE SERVO CIRCUIT

*For the description of the above circuit which is identical to Model AA-R22/32/42, see the service manual for AA-22-32/42.

3-3. PROTECTION CIRCUIT (AM-M7)

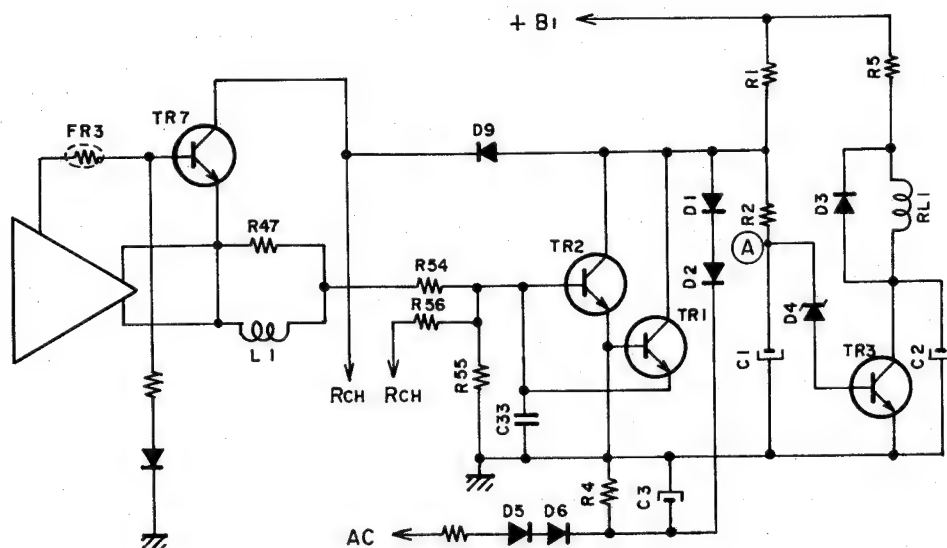


Fig. 3-1 Protection Circuit

3-3-1. WHEN POWER IS ON

+B₁ and AC are both supplied to the protection circuit, then C₁ is charged through R₁ and R₂, TR₃ is turned ON, and the relay (RL₁) is turned ON.

3-3-2. WHEN POWER IS OFF

The AC supplied when the power is ON is rectified by the diodes (D₅, D₆), which charges capacitor C₃. When C₃ has discharged through R₄, the voltage at point (A) drops because the diodes (D₁, D₂) conduct, then the transistor (TR₃) is turned OFF, and the relay (RL₁) is also turned OFF.

3-3-3. SHOULD A DC VOLTAGE OCCUR AT THE MAIN AMPLIFIER OUTPUT

Should a (+) DC voltage occur at the output, the transistor (TR₂) is turned ON through R₅₄, and so the voltage at point (A) drops and the transistor (TR₃) is turned OFF which turns the relay (RL₁) OFF.

Should a (−) DC voltage occur at the output, the transistor (TR₁) is turned ON through R₅₄, and so the voltage at point (A) drops, the transistor (TR₃) is turned OFF and the relay (RL₁) is turned OFF to protect the speaker.

3-3-4. OVERLOAD, OUTPUT TERMINAL SHORTED CONDITIONS

When excess current runs through the power amplifier IC (IC₆), the transistor (TR₇) is turned ON, the voltage at point (A) drops because the diode (D₉) conducts, the transistor (TR₃) is turned OFF, and the relay (RL₁) is turned OFF.

IV. POWER MUTE CIRCUIT

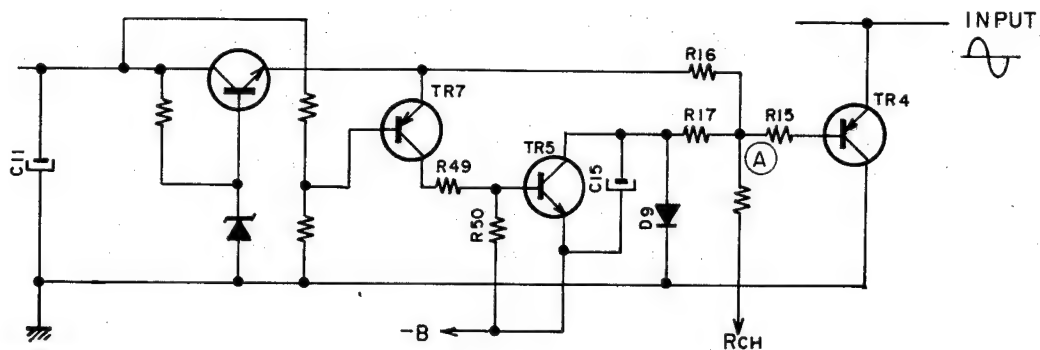


Fig. 4-1 Power Mute Circuit

4-1. WHEN POWER IS ON

When the power is turned ON, the voltage is supplied to the POWER MUTE Circuit and C15 is charged through R16 and R17, during which time the point (A) is negative since one end of Capacitor C15 is connected to -B. Therefore the transistor (TR4) is turned ON, so the input of the main amplifier circuit is grounded to create the mute state. When the capacitor (C15) is completely charged the voltage at point (A) becomes positive, the transistor (TR4) is turned OFF and the mute is released.

4-2. WHEN POWER IS OFF

When the power is turned OFF, the base potential for the transistor (TR7) drops to turn it ON, and the transistor (TR5) is turned ON, the voltage at the point (A) becomes negative, the transistor (TR4) is turned ON and the mute state is created.

V. AUTO FUNCTION CONTROL

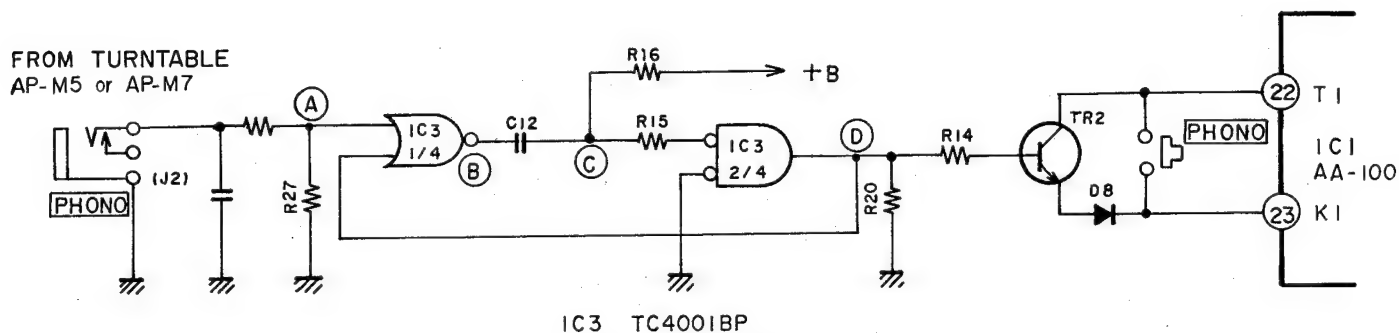


Fig. 5-1 Auto Function Circuit (indicates only PHONO Circuit)

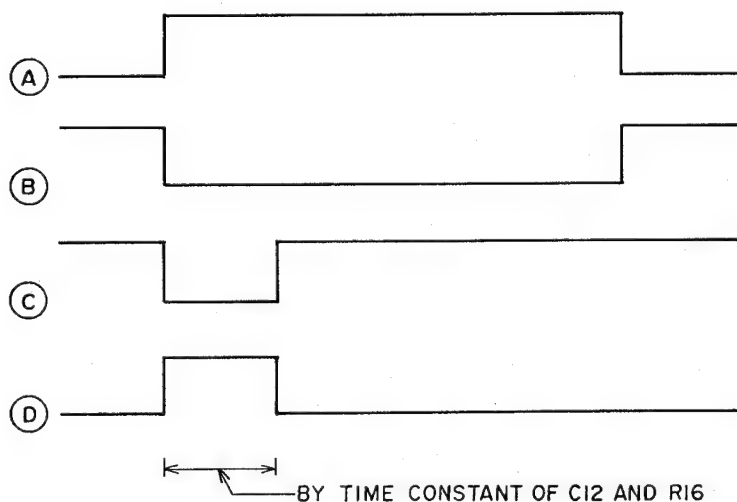
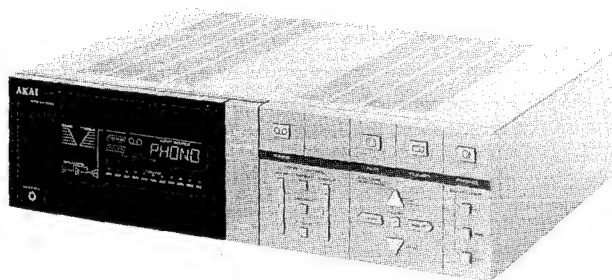
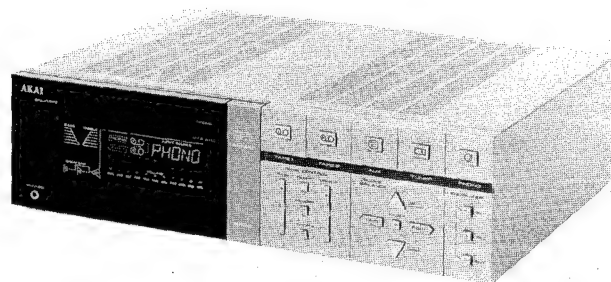


Fig. 5-2 Waveform at Each Points

When an AP-M5 or AP-M7 turntable is connected and operated, a control signal as shown in Fig. 5-2 (A) is input to the auto-function control jack (J2) shown in Fig. 5-1, and the waveform of (D) in Fig. 5-2 is created by the monostable multivibrator formed by IC3 (TC4001). When the waveform of (D) is at "H" level, TR2 is turned ON and the timing pulse from the pin (22) of IC1 AA-100 is received by Key Input K1 at pin (23). This means IC1 AA-100 is put into the PHONO mode.



AM-M5



AM-M7

SECTION 3

SERVICE MANUAL

MODEL AM-M5/M7

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For basic adjustments, measuring methods, and operating principles, refer to GENERAL TECHNICAL MANUAL.

I. SPECIFICATIONS

1-1. MODEL AM-M5

POWER AMPLIFIER SECTION

| | |
|---------------------------------------|--|
| RATED OUTPUT POWER | 30w + 30w (THD 0.05%, 20Hz to 20kHz) |
| (BOTH CHANNELS DRIVEN, AT 8 ohms) | 40w + 40w (EIAJ 5%, 1kHz) |
| POWER BANDWIDTH (IHF -3dB, AT 8 ohms) | 5Hz to 40kHz (THD 0.1%) |
| S/N (IHF A) PHONO | 75dB |
| AUX | 99dB |
| RESIDUAL NOISE (8 ohms) | 0.5mV |
| CHANNEL SEPARATION (IHF 1kHz) | 45dB |
| DAMPING FACTOR (1kHz, 8 ohms) | 30dB |
| APPLICABLE SPEAKER IMPEDANCE | 6 to 16 ohms (for Europe, USA, Canada and Australia) 4 to 16 ohms (for other countries) |

PRE AMPLIFIER SECTION

| | |
|-----------------------------------|--|
| INPUT SENSITIVITY/IMPEDANCE PHONO | 2.5mV/100kohms |
| AUX | 150mV/47kohms |
| TUNER | 150mV/47kohms |
| TAPE | 150mV/47kohms |
| OUTPUT LEVEL/IMPEDANCE TAPE REC | 150mV/3kohms |
| FREQUENCY RESPONSE | |
| PHONO (RIAA DEVIATION) | ±0.5dB (20Hz to 20kHz) |
| TUNER, AUX, TAPE | 5Hz to 80kHz +0dB, -3dB |
| TONE CONTROL BASS | ±8dB (100 kHz) |
| TREBLE | ±8dB (10kHz) |
| POWER REQUIREMENTS | 100V, 50/60Hz for Japan 120V, 60Hz for USA and Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK and Australia 110V/120V/220V/240V, 50Hz/60Hz Switchable for other countries |
| POWER CONSUMPTION | J: 100W U: 140W C, A: 105W |
| DIMENSIONS | 350 (W) × 98 (H) × 267 (D) mm (13.8 × 3.9 × 10.5 inches) |
| WEIGHT | 5.1 kg (11.2 lbs) |

* For improvement purposes, specifications and design are subject to change without notice.

1-2. MODEL AM-M7

POWER AMPLIFIER SECTION

| | |
|---------------------------------------|--|
| RATED OUTPUT POWER | 45w + 45w (THD 0.02%, 20Hz to 20kHz) |
| (BOTH CHANNELS DRIVEN, AT 8 ohms) | 65w + 65w (EIAJ 5% 1kHz) |
| POWER BANDWIDTH (IHF -3dB, at 8 ohms) | 5Hz to 70kHz (THD 0.1%) |
| S/N (IHF A) PHONO | 78dB (MM) |
| AUX | 98dB |
| RESIDUAL NOISE (8 ohms) | 0.5mV |
| CHANNEL SEPARATION (IHF 1kHz) | 45dB |
| DAMPING FACTOR (1kHz, 8 ohms) | 35 |
| APPLICABLE SPEAKER IMPEDANCE | 6 to 16 ohms (for Europe, USA, Canada and Australia) 4 to 16 ohms (for other countries) |

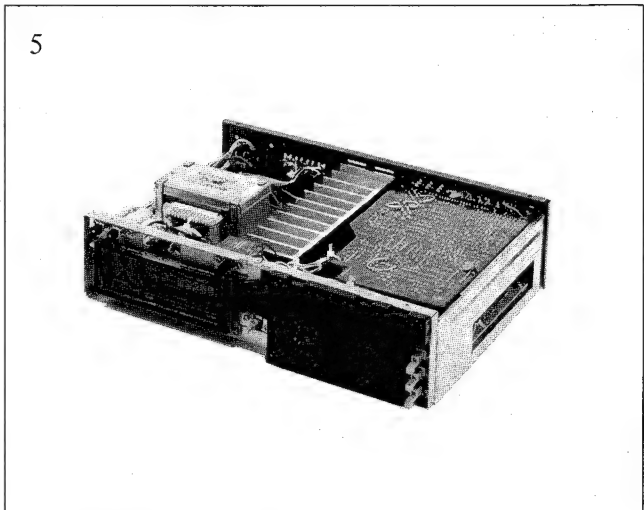
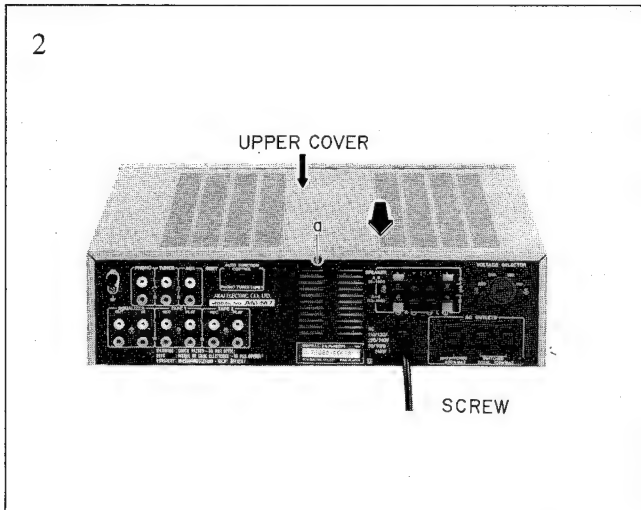
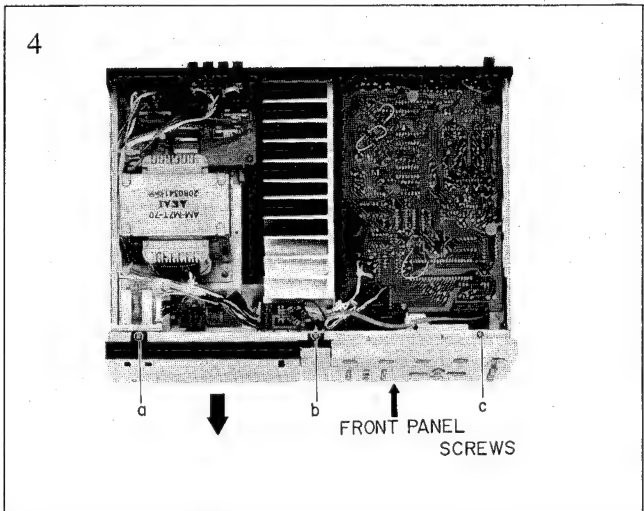
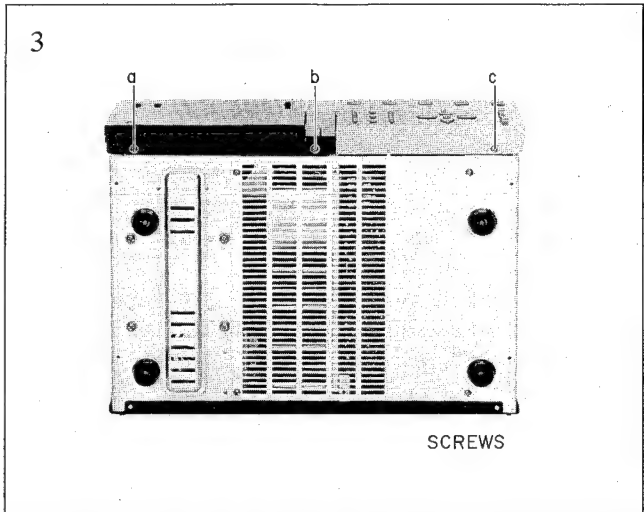
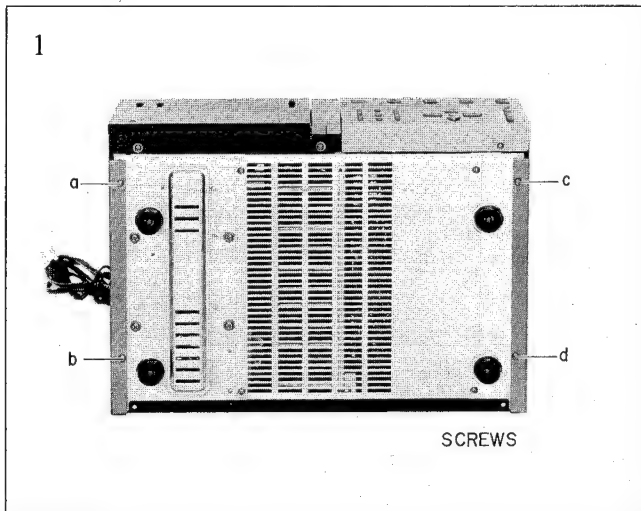
PRE AMPLIFIER SECTION

| | |
|--------------------------------------|--|
| INPUT SENSITIVITY/IMPEDANCE PHONO MC | 0.25mV/100 ohms |
| PHONO MM | 2.5mV/100kohms |
| AUX | 150mV/47kohms |
| TUNER | 150mV/47kohms |
| TAPE | 150mV/47kohms |
| OUTPUT LEVEL/IMPEDANCE TAPE REC | 150mV/3kohms |
| FREQUENCY RESPONSE | |
| PHONO (RIAA DEVIATION) | ±0.5dB (20Hz to 20kHz) |
| TUNER, AUX, TAPE | 5Hz to 80kHz + 0dB, -3dB |
| TONE CONTROL BASS | ±8dB (100Hz) |
| TREBLE | ±8dB (10kHz) |
| POWER REQUIREMENTS | 100V, 50/60Hz for Japan 120V, 60Hz for USA and Canada 220V, 50Hz for Europe except UK 240V, 50Hz for UK and Australia 110V/120V/220V/240V, 50Hz/60Hz Switchable for other countries |
| POWER CONSUMPTION | J: 140W U: 240W C, A: 190W |
| DIMENSIONS | 350 (W) × 98 (H) × 267 (D) mm (13.8 × 3.9 × 10.5 inches) |
| WEIGHT | 6.5kg (13.3 lbs) |

* For improvement purposes, specifications and design are subject to change without notice.

II. DISMANTLING OF UNIT

In case of trouble, etc. necessitating dismantling, please dismantle in the order shown in the photographs. Reassemble in reverse order.



III. CONTROLS

3-1. MODEL AM-M5

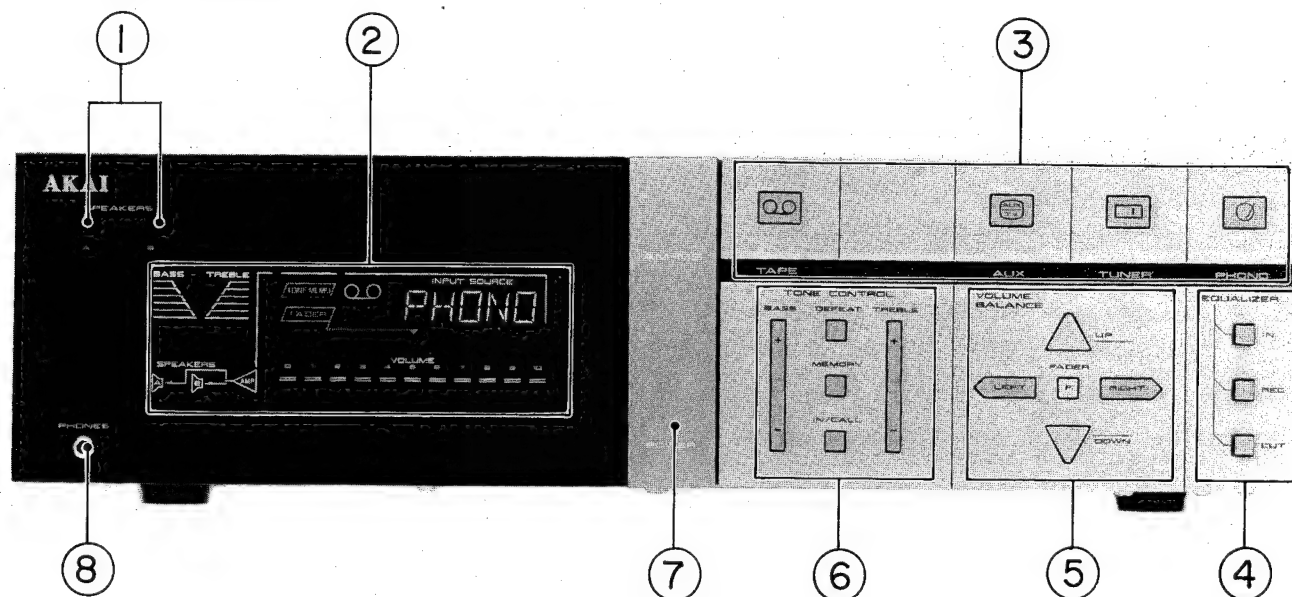


Fig. 3-1 Front View

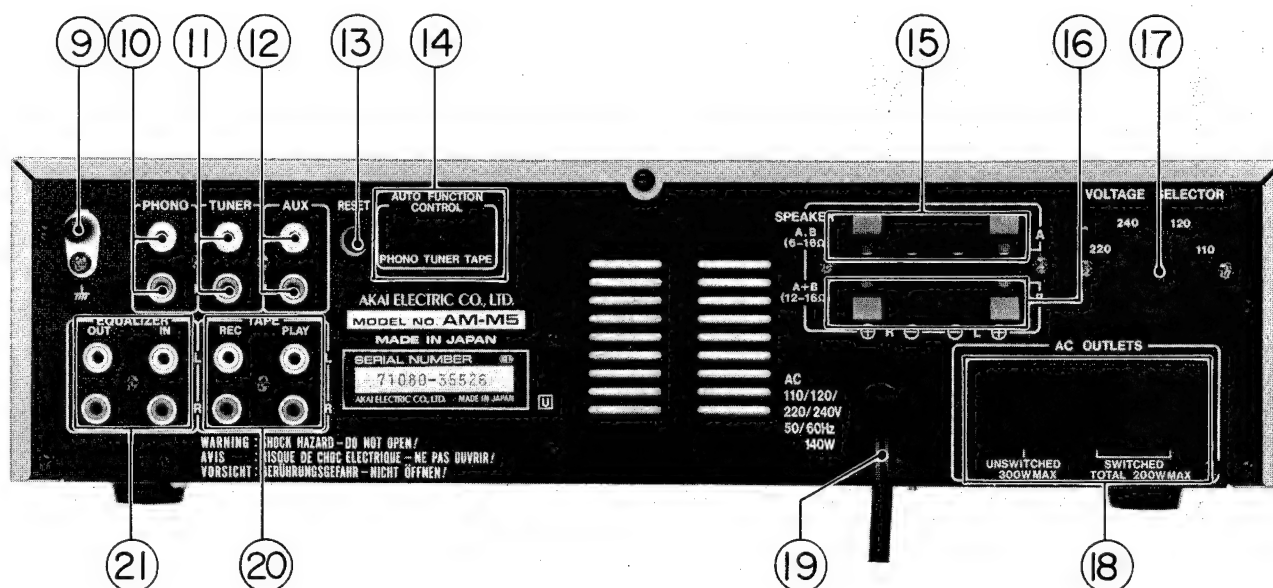


Fig. 3-2 Rear View

- | | |
|---------------------------------|---|
| 1. SPEAKER SELECTORS | 12. AUX. JACKS |
| 2. FL DISPLAY | 13. RESET SWITCH |
| 3. INPUT SELECTOR | 14. AUTO FUNCTION CONTROL JACKS |
| 4. EQUALIZER IN/REC/CUT BUTTONS | 15. SPEAKER A TERMINAL |
| 5. VOLUME AND BALANCE CONTROLS | 16. SPEAKER B TERMINAL |
| 6. TONE CONTROLS | 17. VOLTAGE SELECTOR (U/T ONLY) |
| 7. POWER SWITCH | 18. AC OUTLET (U/T, CSA, AAL, JPN ONLY) |
| 8. HEADPHONES | 19. AC CORD |
| 9. GROUND TERMINAL (⏏) | 20. TAPE SYSTEM REC/PLAY JACKS |
| 10. PHONO JACKS | 21. EQUALIZER IN/OUT JACKS |
| 11. TUNER JACKS | |

3-2. MODEL AM-M7

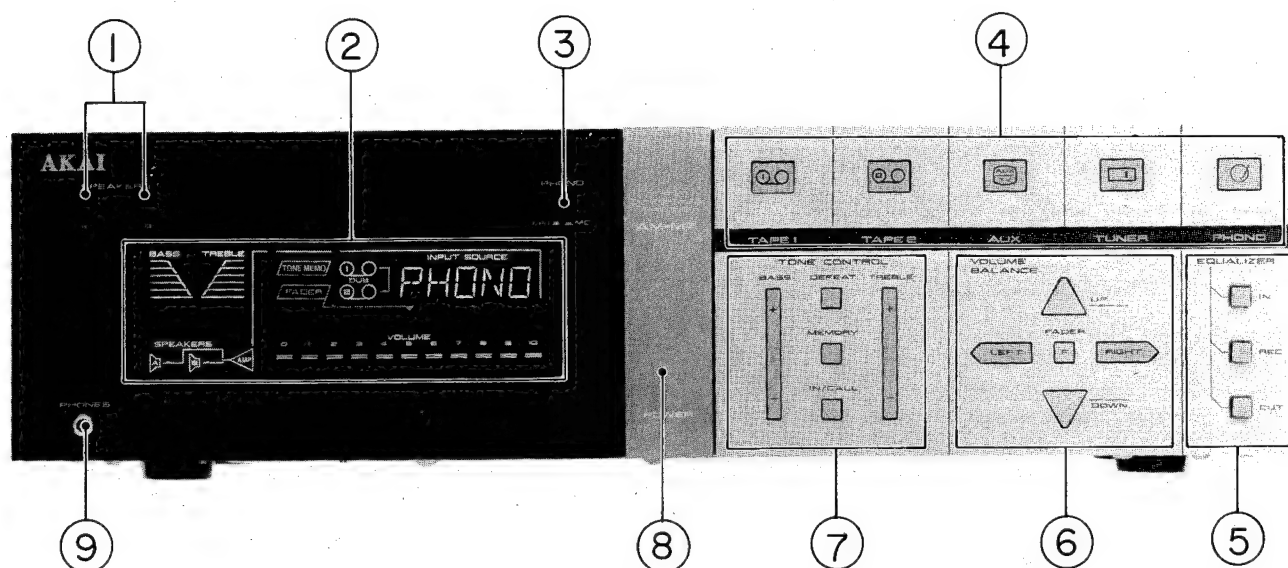


Fig. 3-3 Front View

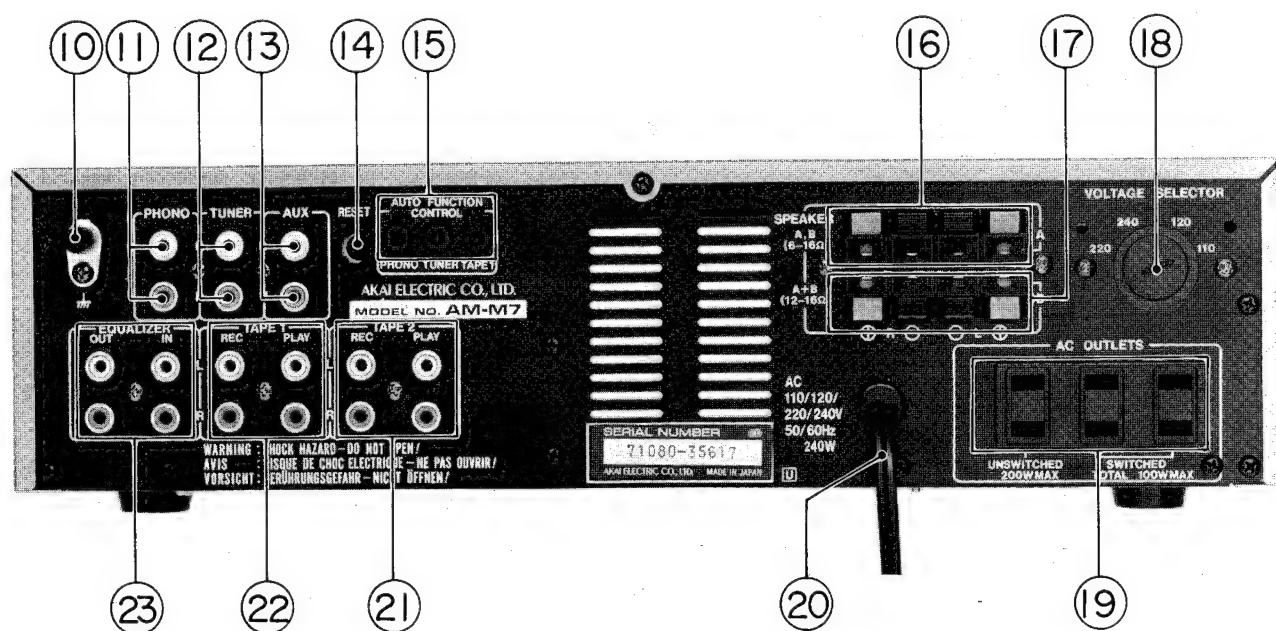


Fig. 3-4 Rear View

- | | |
|---------------------------------|---|
| 1. SPEAKER SELECTORS | 13. AUX. JACKS |
| 2. FL DISPLAY | 14. RESET SWITCH |
| 3. CARTRIDGE SELECTOR | 15. AUTO FUNCTION CONTROL JACKS |
| 4. INPUT SOURCE SELECTOR | 16. SPEAKER A TERMINAL |
| 5. EQUALIZER IN/REC/CUT BUTTONS | 17. SPEAKER B TERMINAL |
| 6. VOLUME AND BALANCE CONTROLS | 18. VOLTAGE SELECTOR (U/T ONLY) |
| 7. TONE CONTROLS | 19. AC OUTLET (U/T, CSA, AAL, JPN ONLY) |
| 8. POWER SWITCH | 20. AC CORD |
| 9. HEADPHONE JACK | 21. TAPE SYSTEM 2 REC/PLAY JACKS |
| 10. GROUND TERMINAL (⏏) | 22. TAPE SYSTEM 1 REC/PLAY JACKS |
| 11. PHONO JACKS | 23. EQUALIZER IN/OUT JACKS |
| 12. TUNER JACKS | |

IV. PRINCIPAL PARTS LOCATION

4-1. MODEL AM-M5

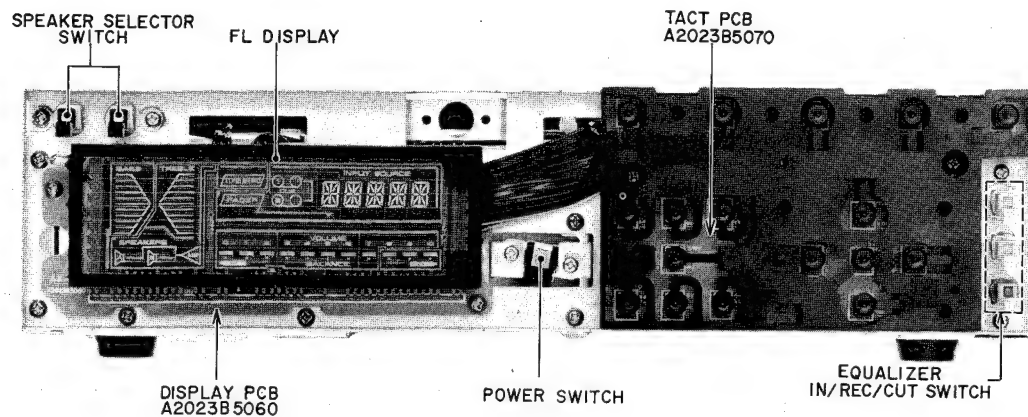


Fig. 4-1 Front View

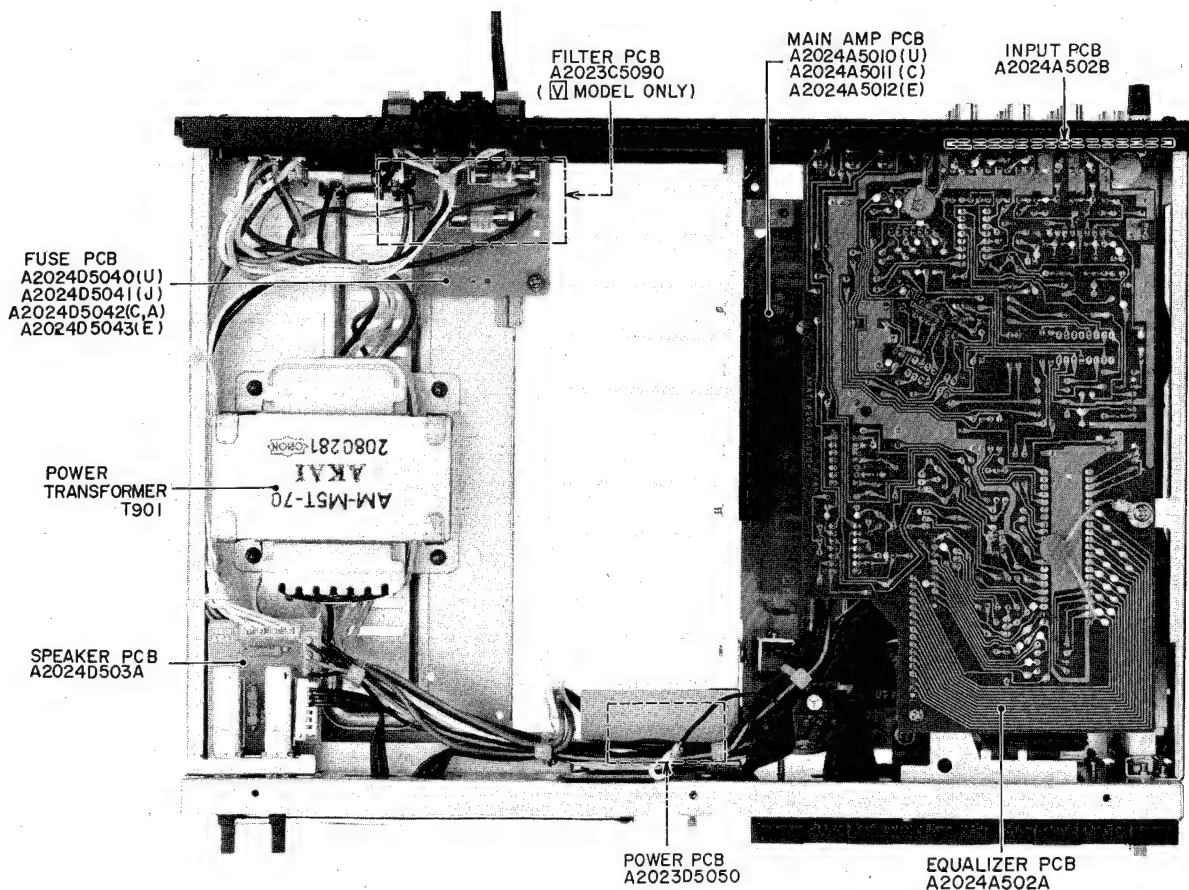


Fig. 4-2 Top View

4-2. MODEL AM-M7

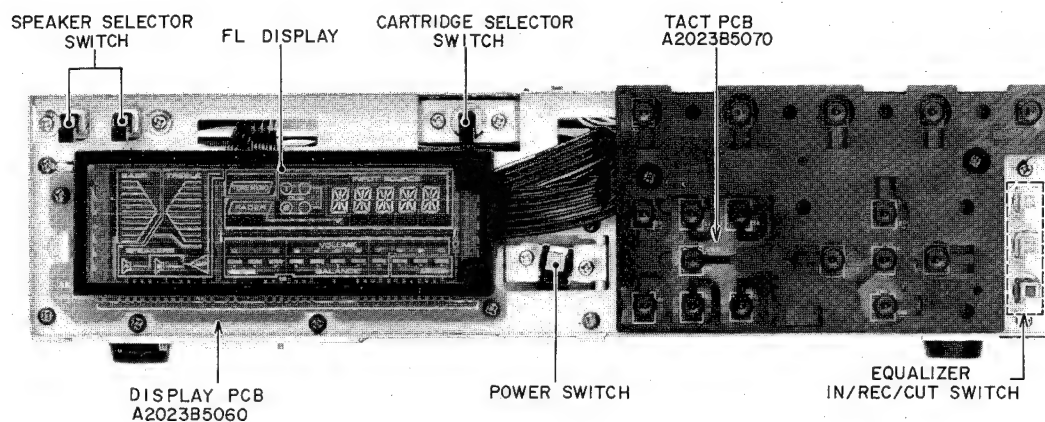


Fig. 4-3 Front View

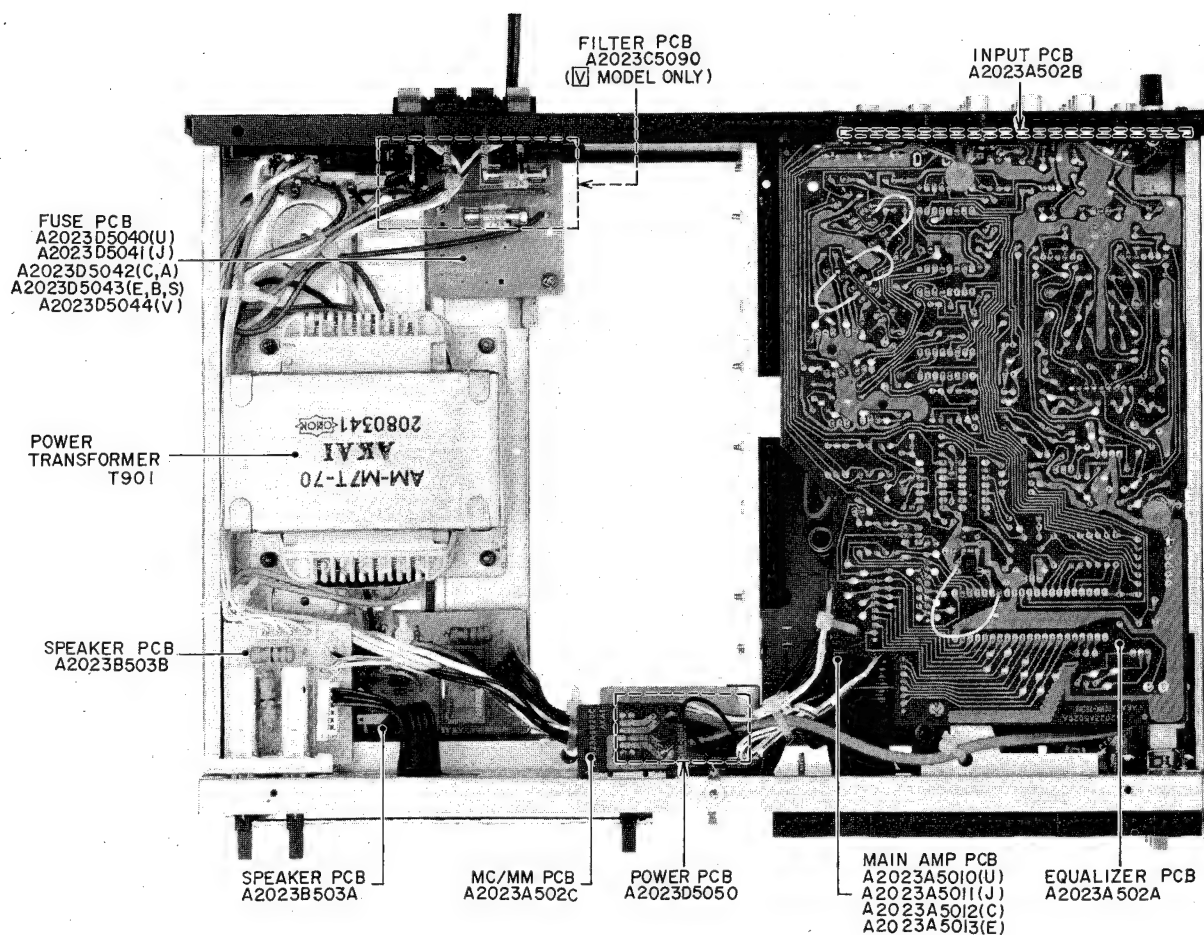


Fig. 4-4 Top View

V. VOLTAGE CONVERSION

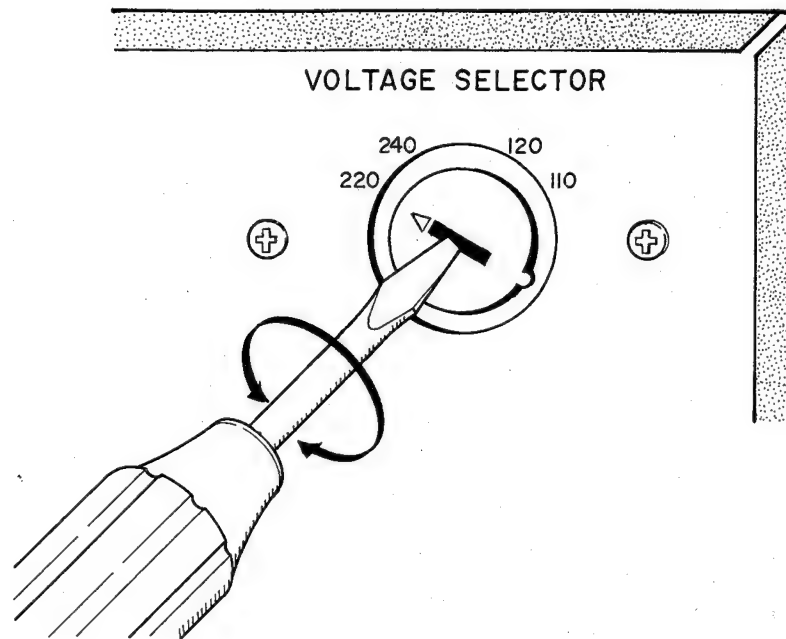


Fig. 5-1 Rear View

Models for Canada, USA, Europe, UK, Australia and Japan are not equipped with this facility. Each machine is present at the factory according to destination, but some machines can be set to 110V, 120V, 220V or 240V as required. If your machine is fitted with a voltage selector.

1. Disconnect the power cord.
2. Turn the **VOLTAGE SELECTOR** located on the rear panel with a screwdriver until the correct voltage is indicated.

VI. CLASSIFICATION OF VARIOUS P.C BOARDS

6-1. MODEL AM-M5 P.C BOARD TITLES AND IDENTIFICATION NUMBERS

| PCB | | NO. | |
|------------|-----------|-------------|---------|
| MAIN-AMP | P.C Board | A2024A5010 | U J |
| MAIN-AMP | P.C Board | A2024A5011 | C A |
| MAIN-AMP | P.C Board | A2024A5012 | E V B S |
| EQUALIZER | P.C Board | A2024A5020A | |
| INPUT | P.C Board | A2024A5020B | |
| DISPLAY | P.C Board | A2023B5060 | |
| TACT | P.C Board | A2023B5070 | |
| SPEAKER | P.C Board | A2024D503A | |
| HEAD PHONE | P.C Board | A2024D503B | |
| FILTER | P.C Board | A2023C5090 | V only |
| FUSE | P.C Board | A2024D5040 | U |
| FUSE | P.C Board | A2024D5041 | J |
| FUSE | P.C Board | A2024D5042 | C A |
| FUSE | P.C Board | A2024D5043 | E B S |
| FUSE | P.C Board | A2024D5044 | V |
| POWER | P.C Board | A2023D5050 | |

6-2. MODEL AM-M7 P.C BOARD TITLES AND IDENTIFICATION NUMBERS

| PCB | | NO. | |
|-----------|-----------|-------------|---------|
| MAIN-AMP | P.C Board | A2023A5010 | U |
| MAIN-AMP | P.C Board | A2023A5011 | J |
| MAIN-AMP | P.C Board | A2023A5012 | C A |
| MAIN-AMP | P.C Board | A2023A5013 | E V B S |
| EQUALIZER | P.C Board | A2023A5020A | |
| INPUT | P.C Board | A2023A5020B | |
| MC/MM | P.C Board | A2023A5020C | |
| DISPLAY | P.C Board | A2023B5060 | |
| TACT | P.C Board | A2023B5070 | |
| SPEAKER | P.C Board | A2023B503A | |
| SPEAKER | P.C Board | A2023B503B | |
| SPEAKER | P.C Board | A2023B503C | |
| FILTER | P.C Board | A2023C5090 | V only |
| FUSE | P.C Board | A2023D5040 | U |
| FUSE | P.C Board | A2023D5041 | J |
| FUSE | P.C Board | A2023D5042 | C A |
| FUSE | P.C Board | A2023D5043 | E B S |
| FUSE | P.C Board | A2023D5044 | V |
| POWER | P.C Board | A2023D5050 | |

6-3. MODEL AM-M5 COMPOSITION OF VARIOUS P.C BOARDS

1) MODEL AM-M5 MAIN-AMP P.C BOARD A2024A5010, 11, 12

WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.
 AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

LOCATION OF COMPONENTS

IC
 IC1---C3
 IC2---B3
 IC3---A3
 IC4---A3
 IC5---B1
 IC6---A2

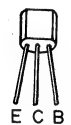
TR

TR1---D3
 TR2,6---C3
 TR3---D1
 TR4---A2
 TR4b---B2
 TR5,7---C2

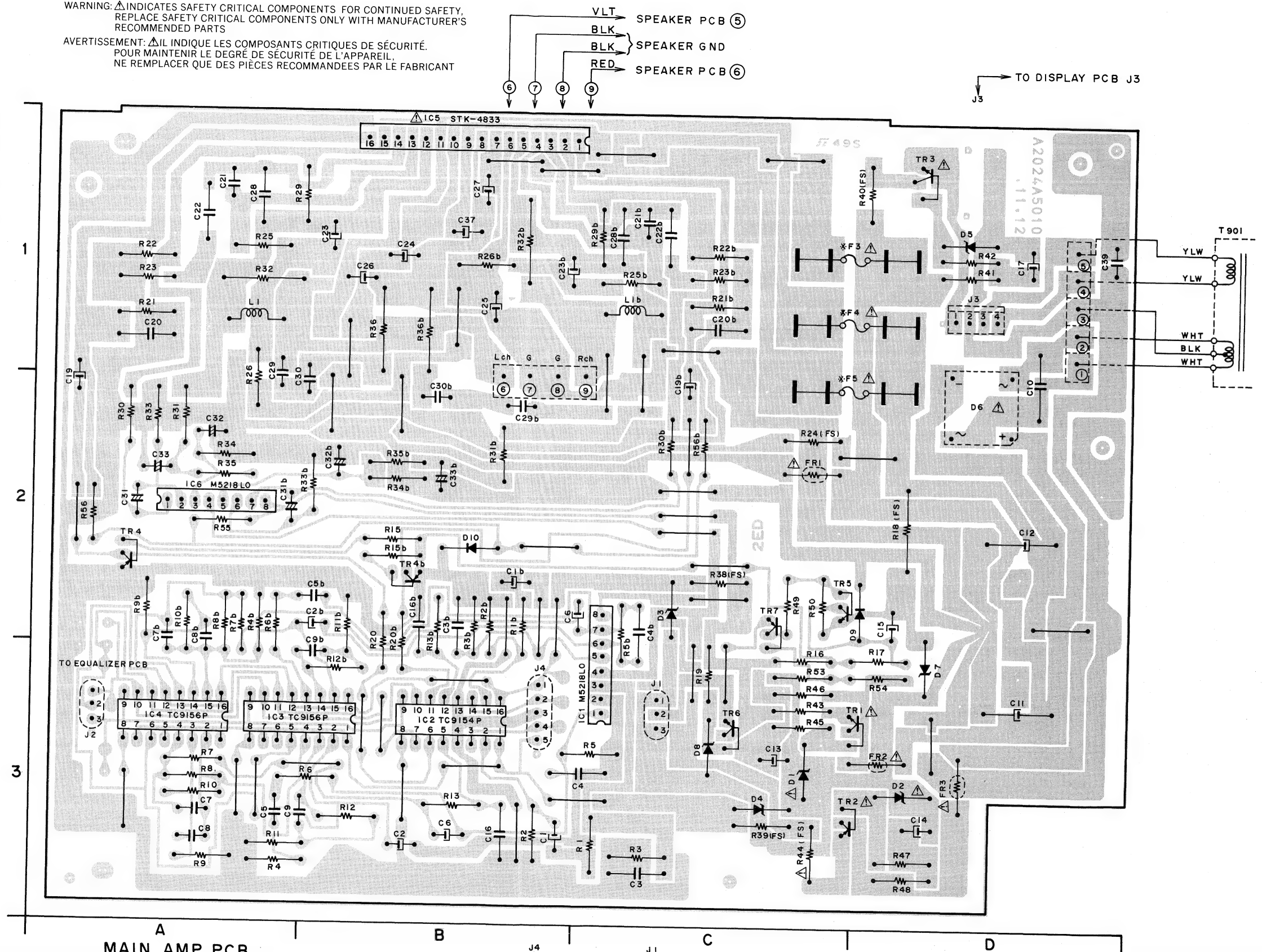
TR1, TR3---2SD612K(E,F)
 TR2---2SB632K(E,F)
 TR4, TR4b---2SA608K-NP(E,F)
 TR7---2SC536K-NP(E,F)



2SD612K(E,F)
 2SB632K(E,F)



2SA608K-NP(E,F)
 2SC536K-NP(E,F)



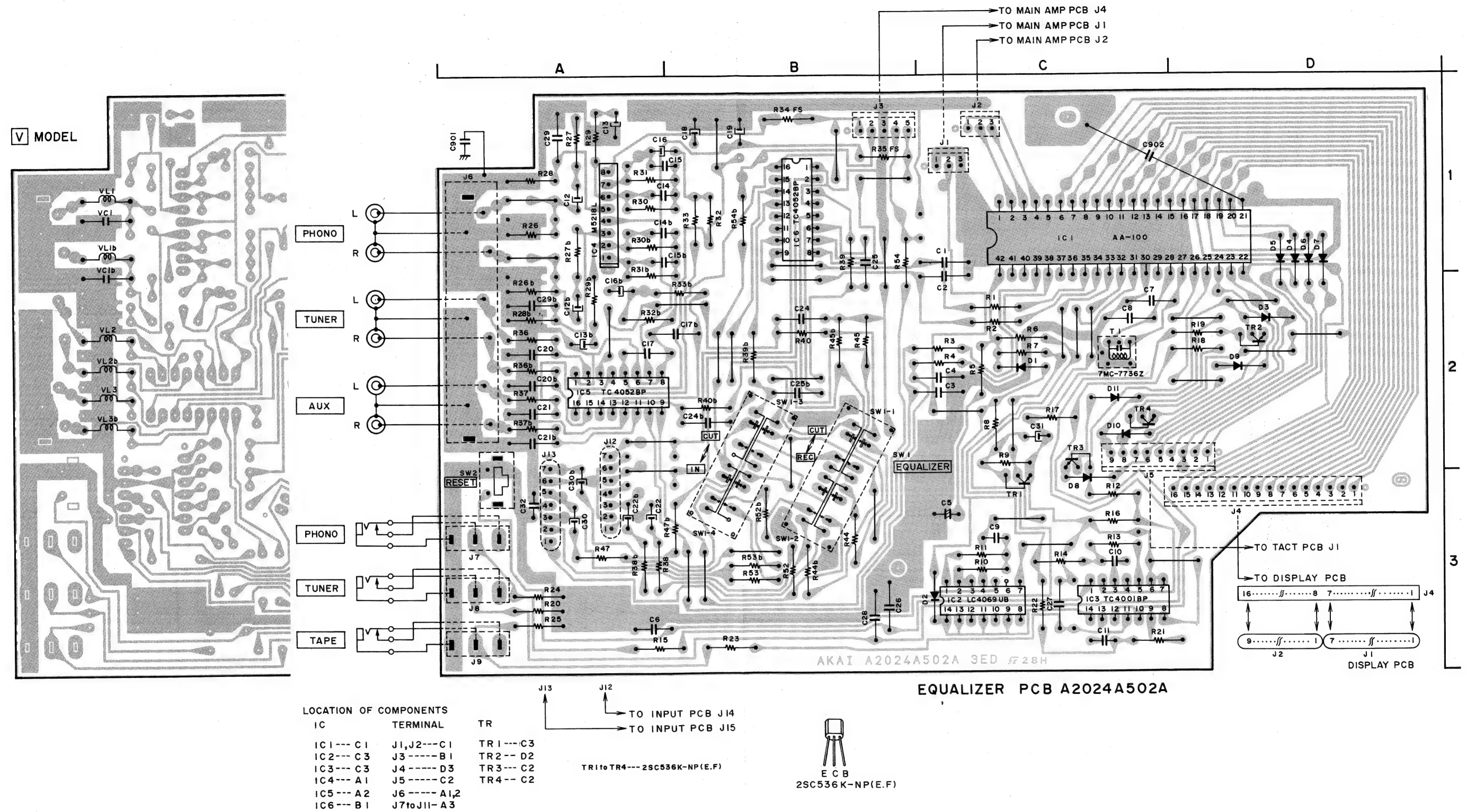
A
 MAIN AMP PCB

A2024 A5010 U J
 A2024 A5011 C A
 A2024 A5012 E V B S

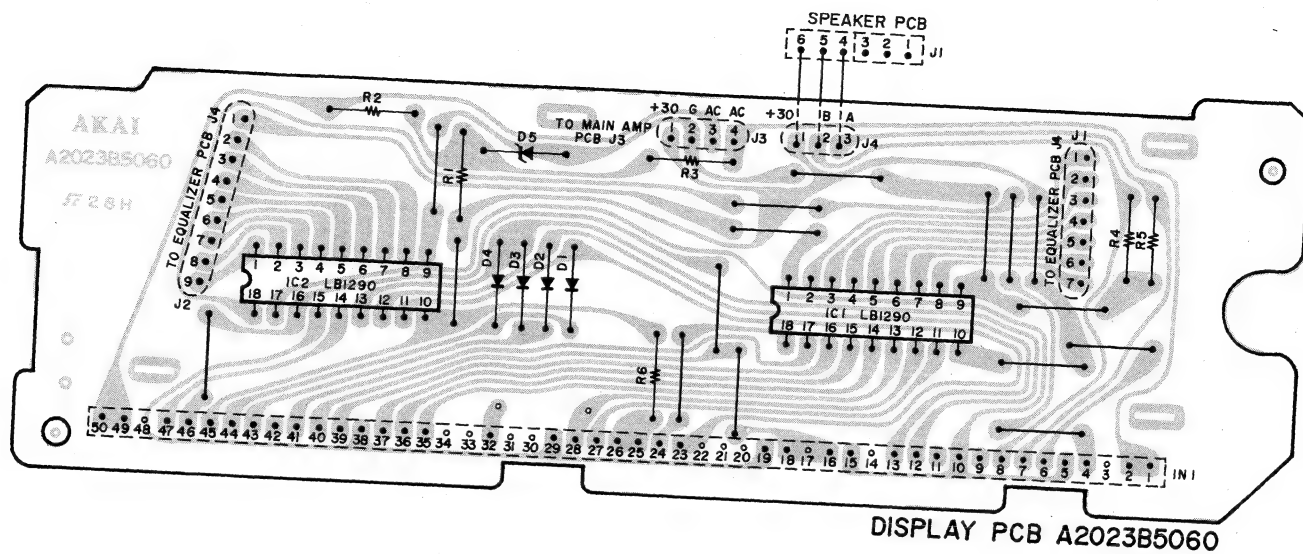
J4
 J1
 TO EQUALIZER PCB J1
 TO EQUALIZER PCB J3

| * | U | J | C A | E V B S |
|----|----------|----------|----------|---------|
| F3 | 5A250V | 5A250V | 5A125V | T 5 A |
| F4 | 2.5A250V | 2.5A250V | 2.5A125V | T 2 A |
| F5 | 2.5A250V | 2.5A250V | 2.5A125V | T 2 A |

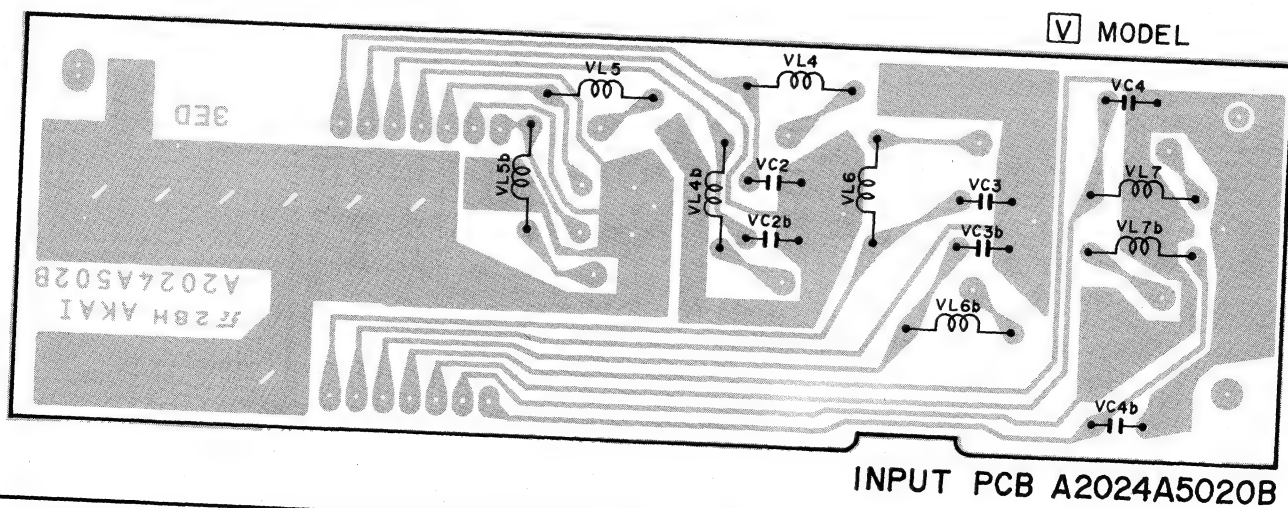
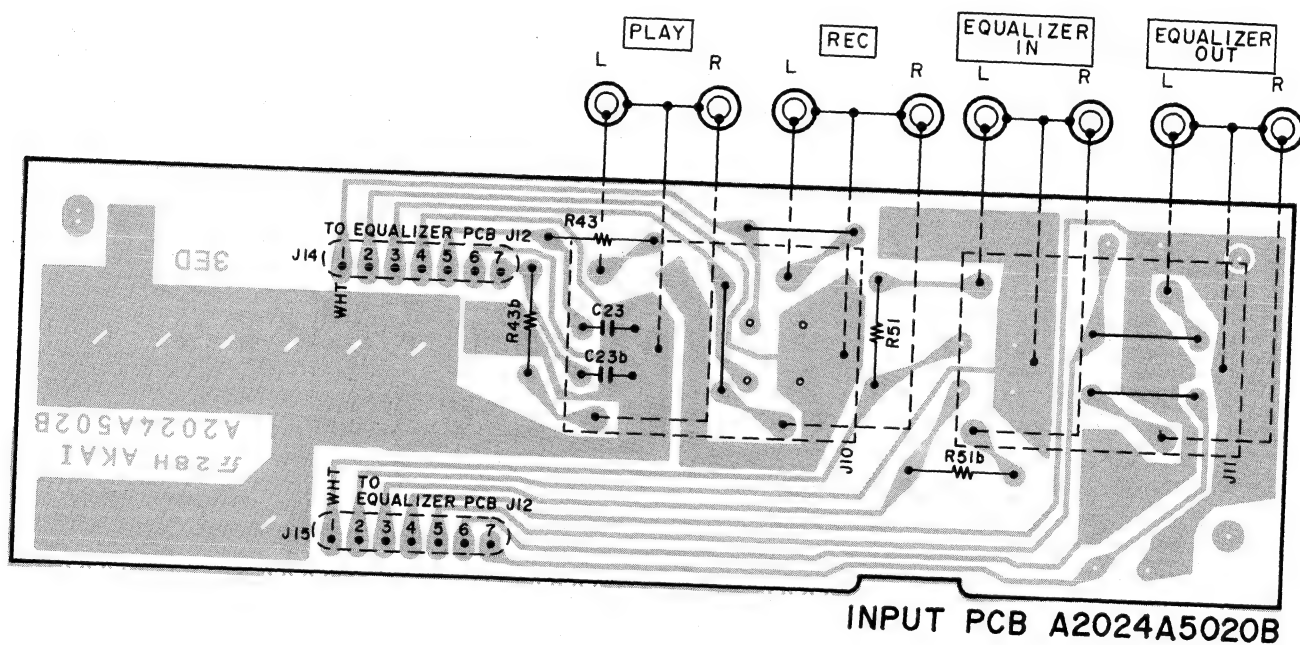
2) MODEL AM-M5 EQUALIZER P.C BOARD A2024A5020A



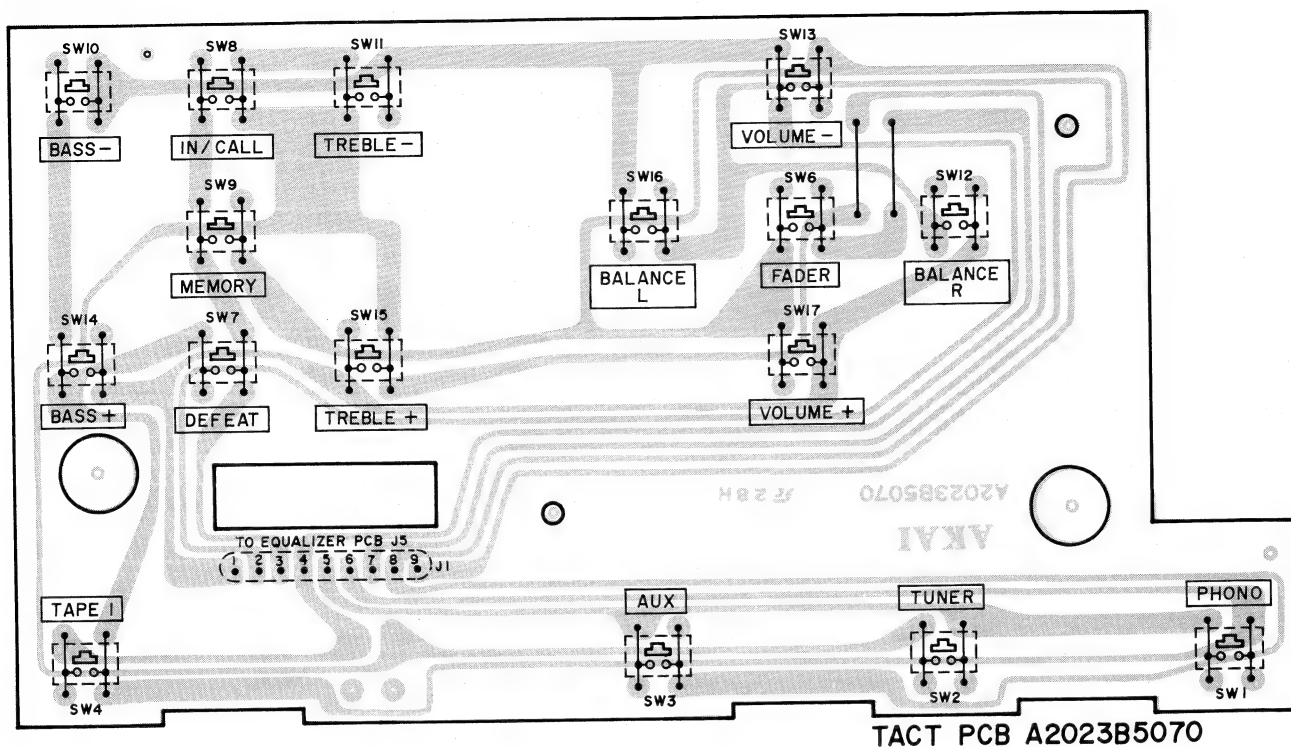
3) MODEL AM-M5 DISPLAY P.C BOARD A2023B5060



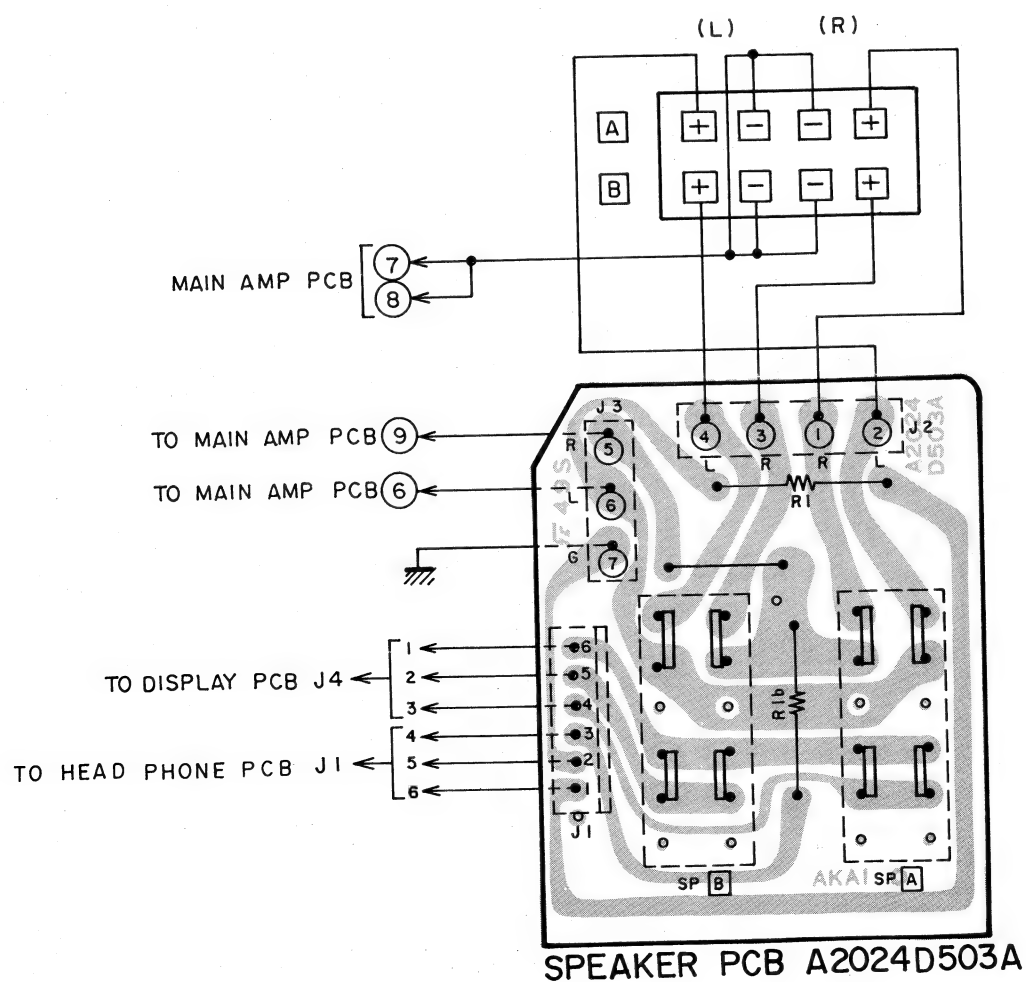
4) MODEL AM-M5 INPUT P.C BOARD A2024A5020B



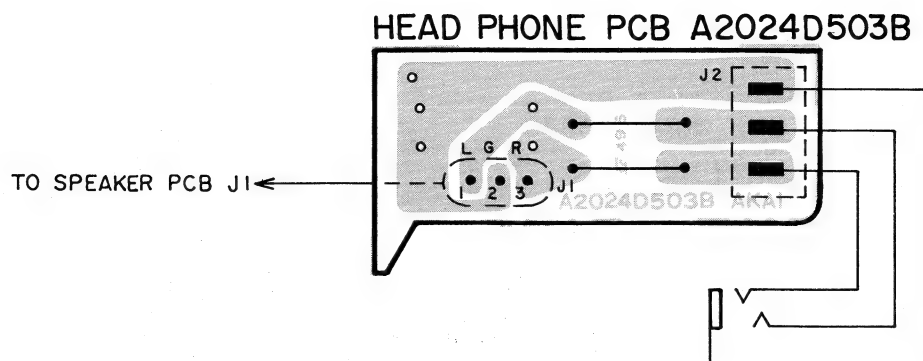
5) MODEL AM-M5 TACT P.C BOARD A2023B5070



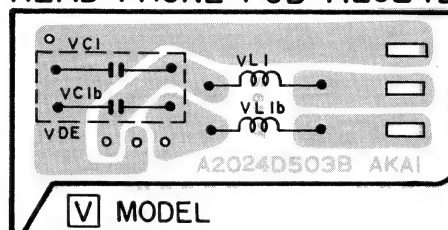
6) MODEL AM-M5 SPEAKER P.C BOARD A2024D503A



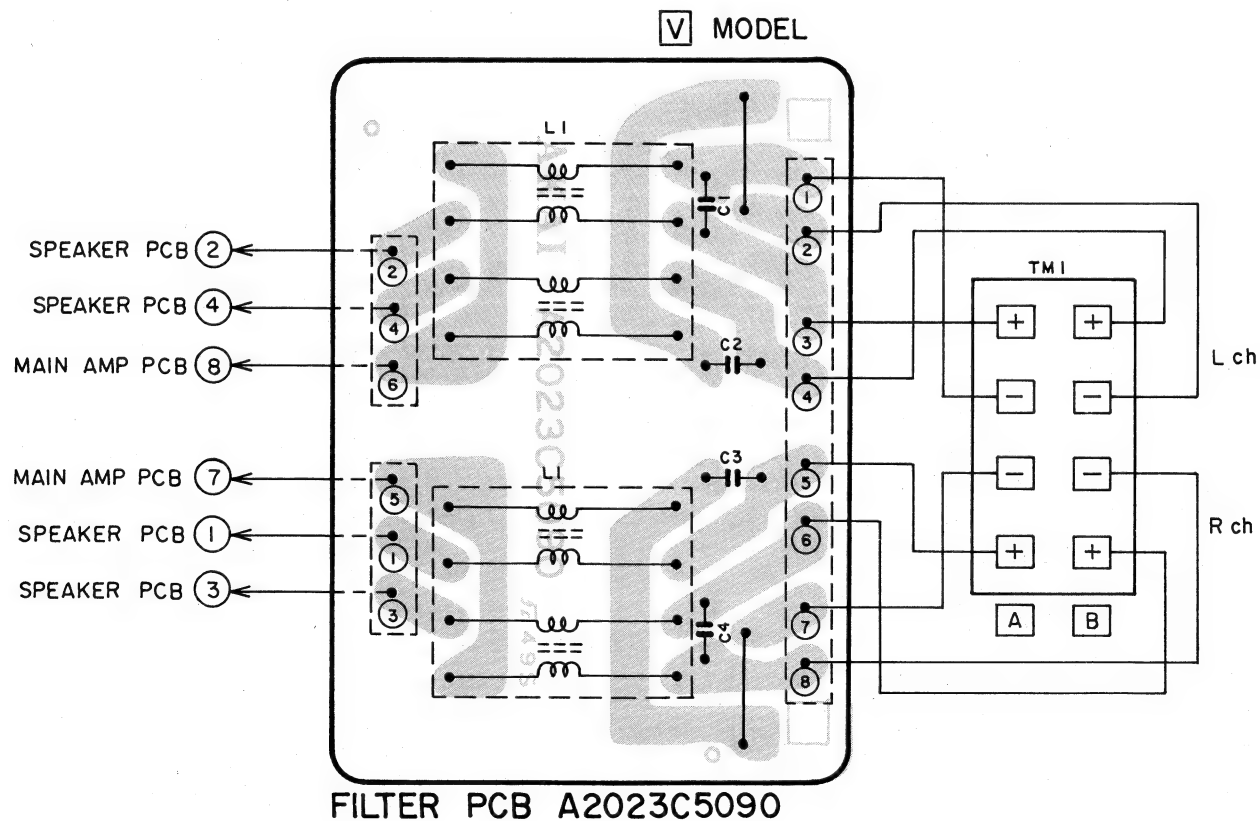
7) MODEL AM-M5 HEAD PHONE P.C BOARD A2024D503B



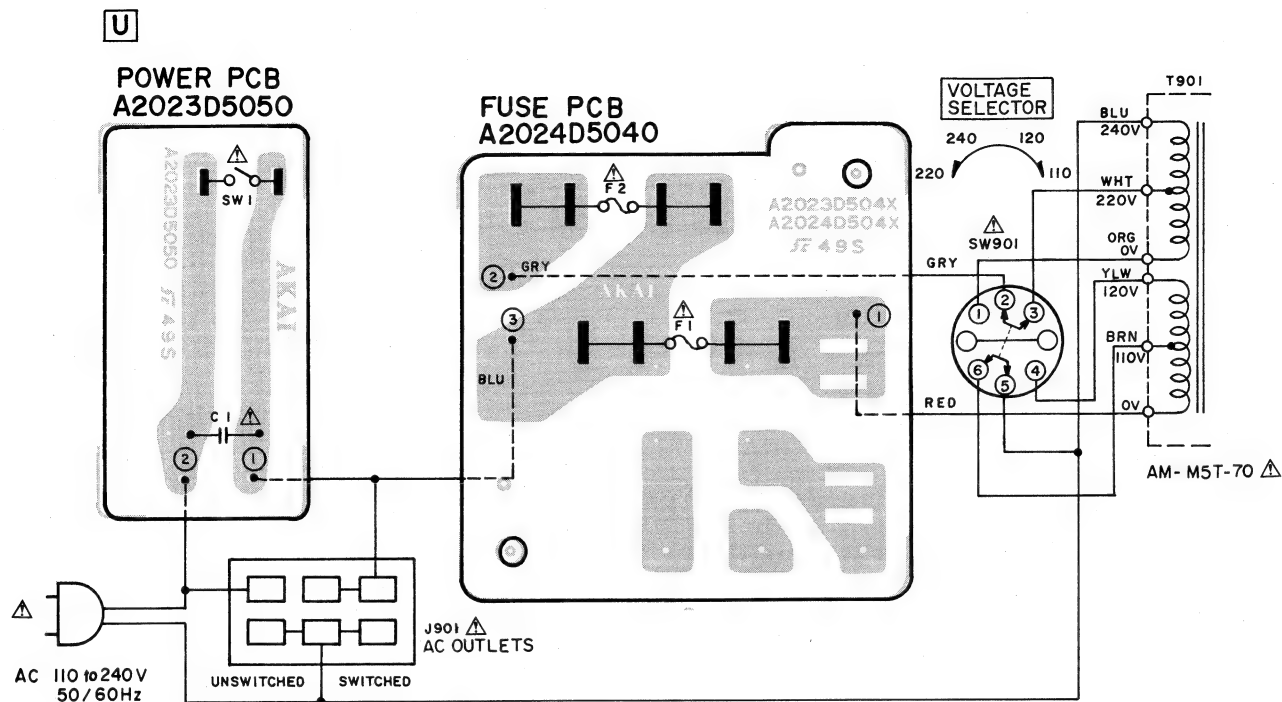
HEAD PHONE PCB A2024D503B



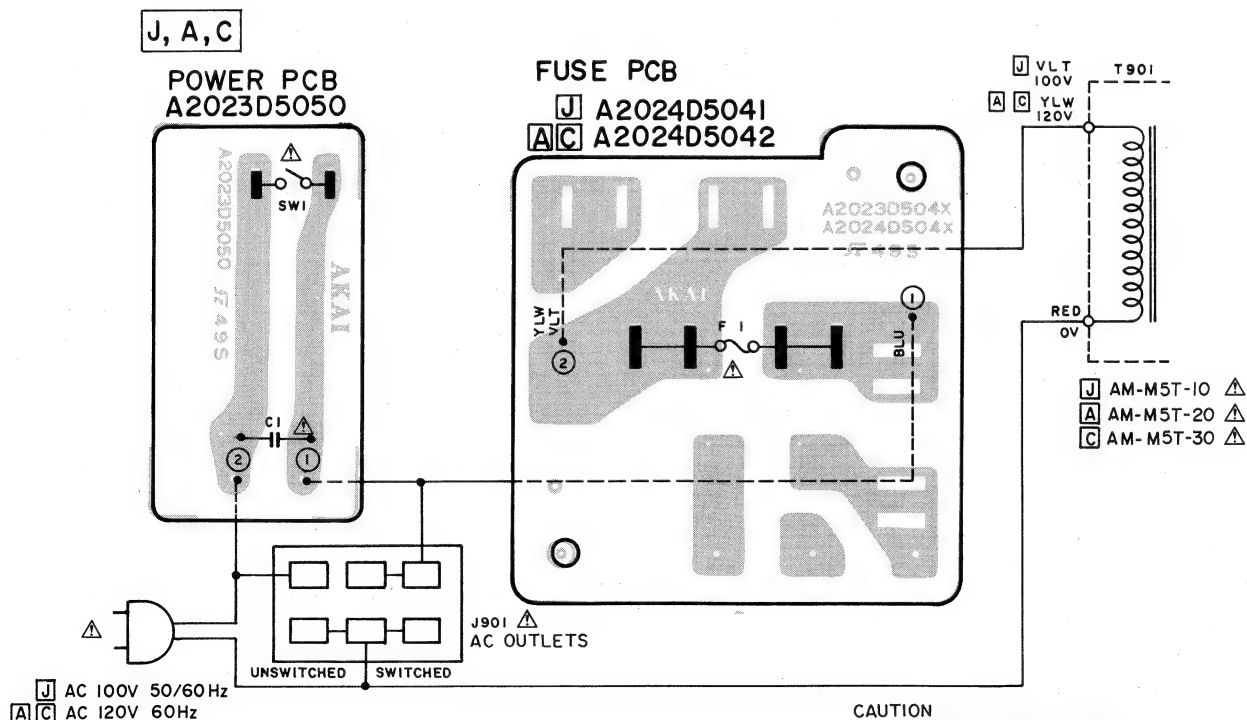
8) MODEL AM-M5 FILTER P.C BOARD A2023C5090



9) MODEL AM-M5 FUSE P.C BOARD A2024D5040 POWER P.C BOARD A2023D5050



10) MODEL AM-M5 FUSE P.C BOARD A2024D5041, 42 POWER P.C BOARD A2023D5050

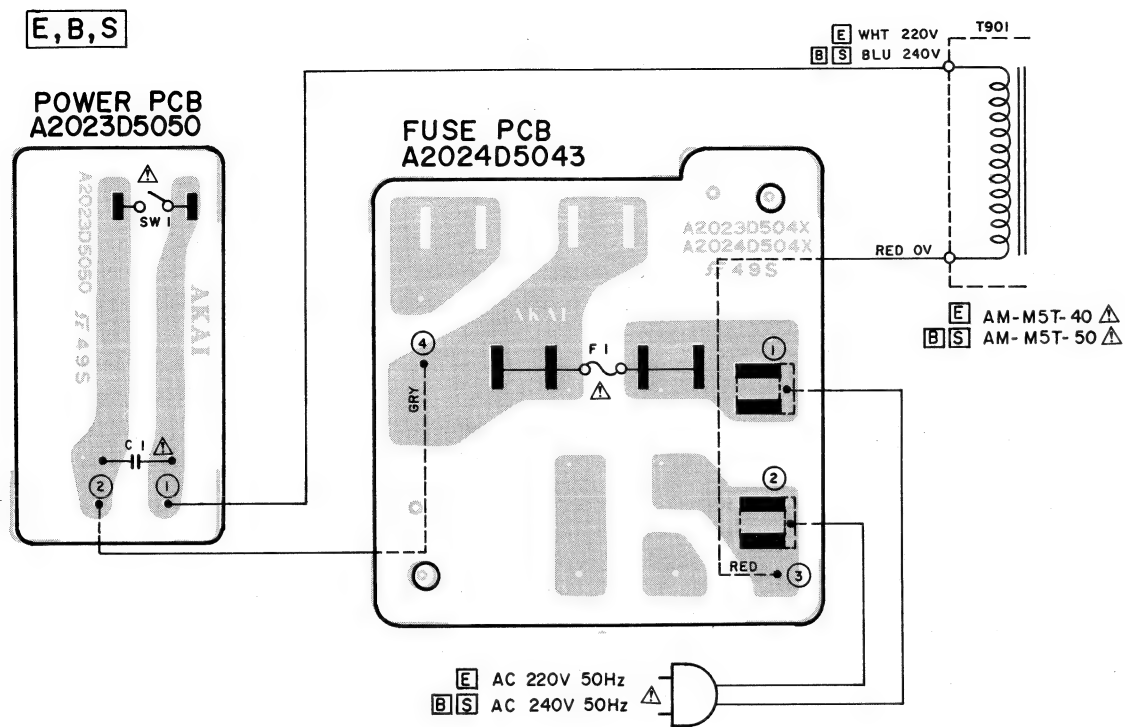


CAUTION
FOR CONTINUED PROTECTION
AGAINST FIRE HAZARD REPLACE
ONLY WITH SAM TYPE FUSE.

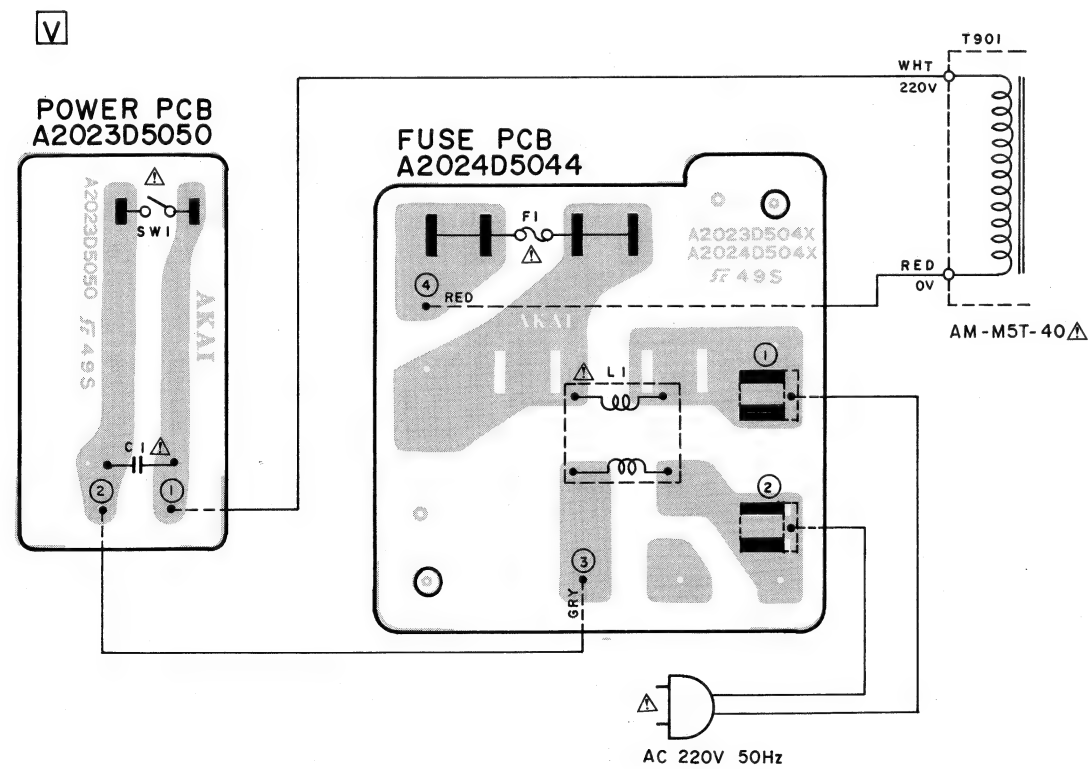
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

11) MODEL AM-M5 FUSE P.C BOARD A2024D5043 POWER P.C BOARD A2023D5050



12) MODEL AM-M5 FUSE P.C BOARD A2024D5044 POWER P.C BOARD A2023D5050



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

6-4. MODEL AM-M7 COMPOSITION OF VARIOUS P.C BOARDS

1) MODEL AM-M7 MAIN-AMP P.C BOARD A2023A5010, 11, 12, 13

LOCATION OF COMPONENTS

IC

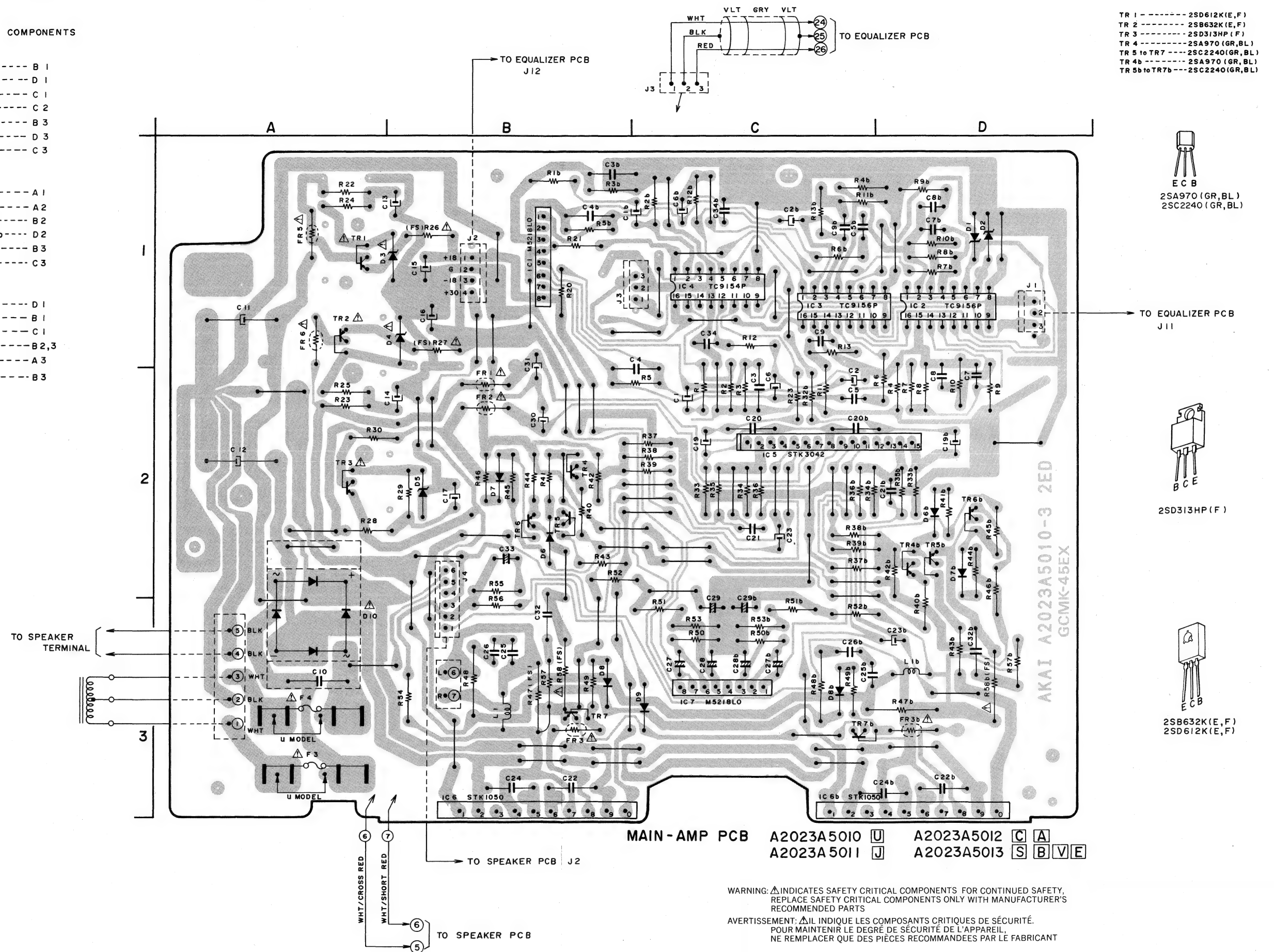
| | | |
|---------|-------|-----|
| IC 1 | ----- | B 1 |
| IC 2 | ----- | D 1 |
| IC 3, 4 | ----- | C 1 |
| IC 5 | ----- | C 2 |
| IC 6 | ----- | B 3 |
| IC 6b | ----- | D 3 |
| IC 7 | ----- | C 3 |

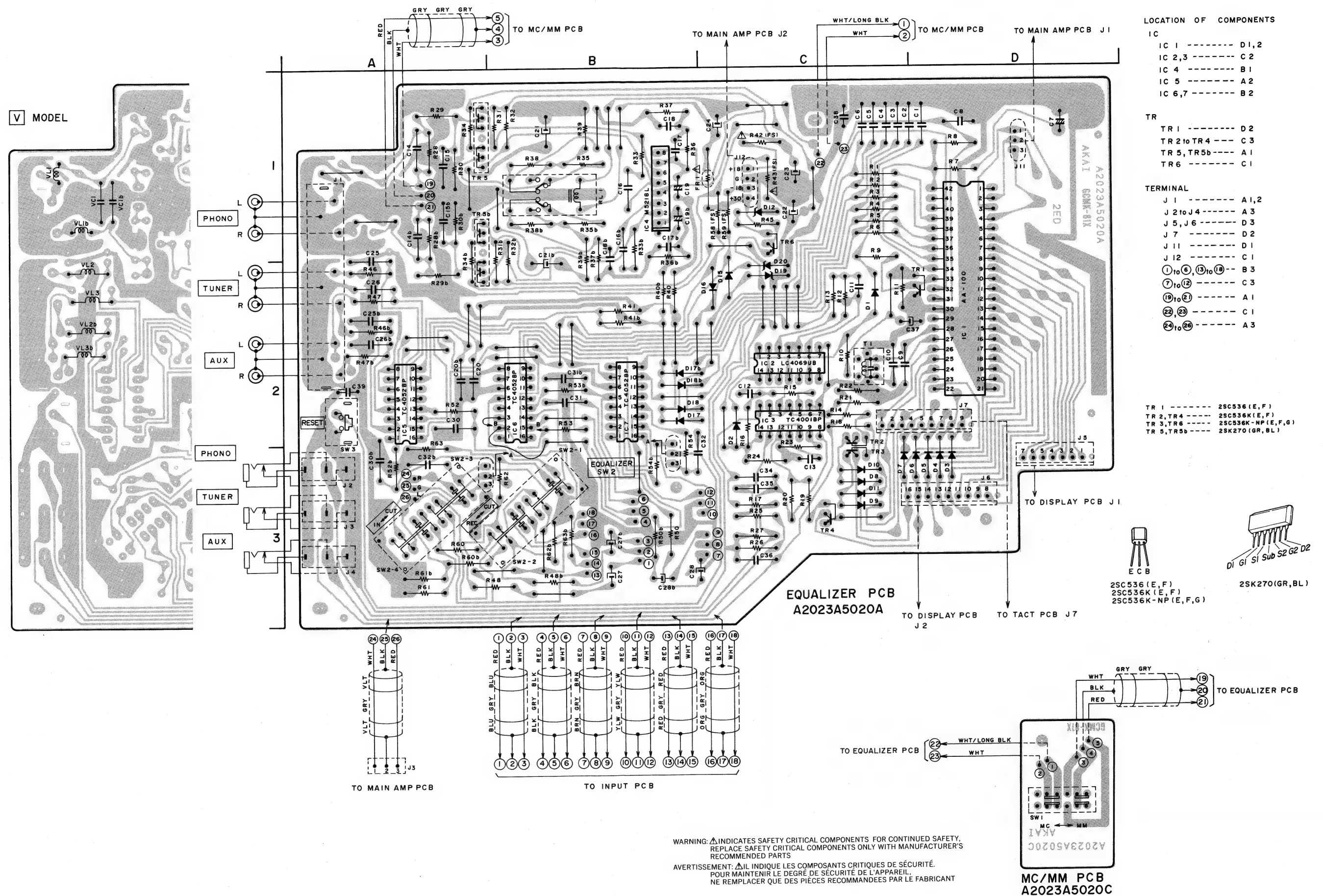
TR

| | | |
|----------------|-------|-----|
| TR 1,2 | ----- | A 1 |
| TR 3 | ----- | A 2 |
| TR 4 to TR 6 | ----- | B 2 |
| TR 4b to TR 6b | ----- | D 2 |
| TR 7 | ----- | B 3 |
| TR 7b | ----- | C 3 |

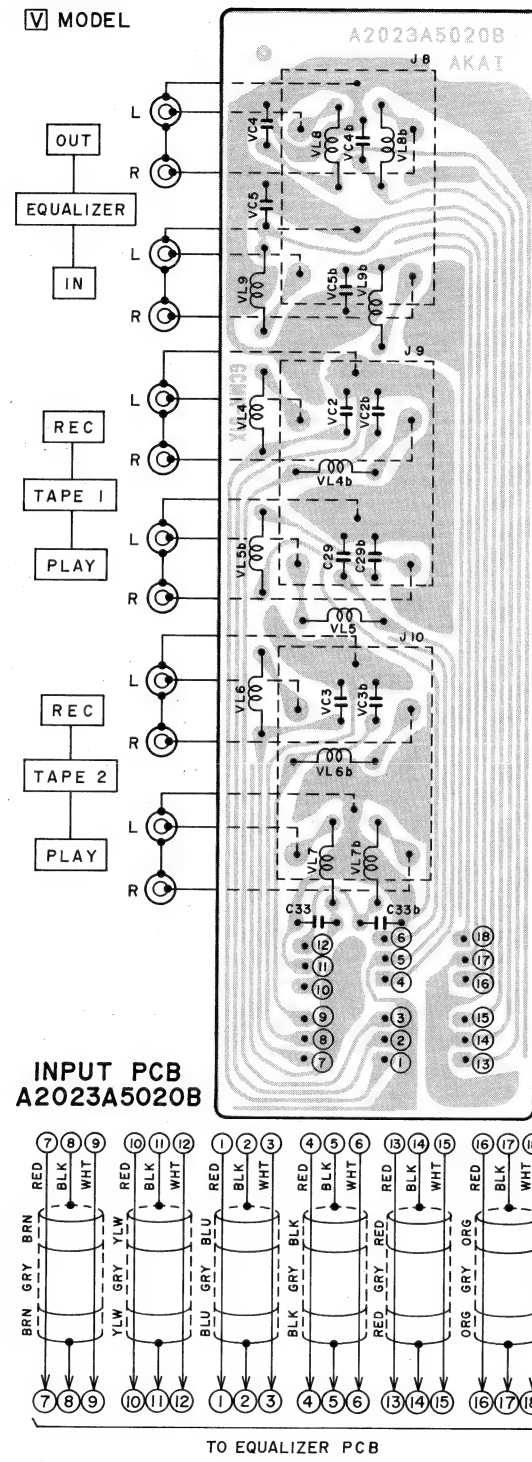
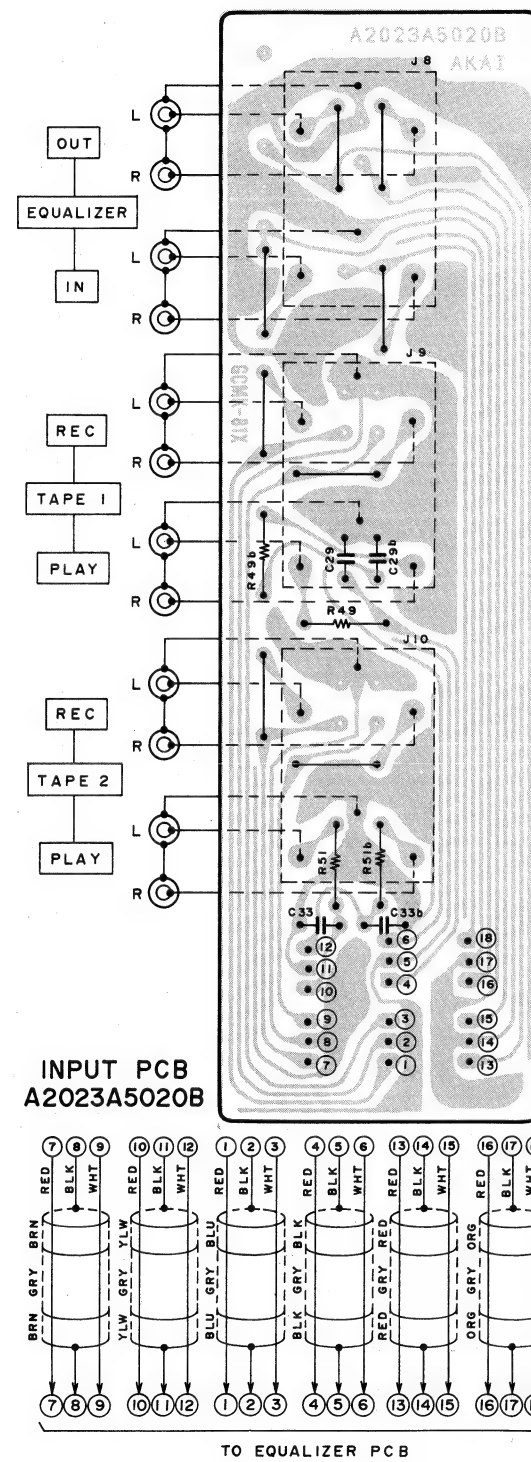
TERMINAL

| | | |
|--------|-------|--------|
| J 1 | ----- | D 1 |
| J 2 | ----- | B 1 |
| J 3 | ----- | C 1 |
| J 4 | ----- | B 2, 3 |
| ① to ⑨ | ----- | A 3 |
| ⑥, ⑦ | ----- | B 3 |

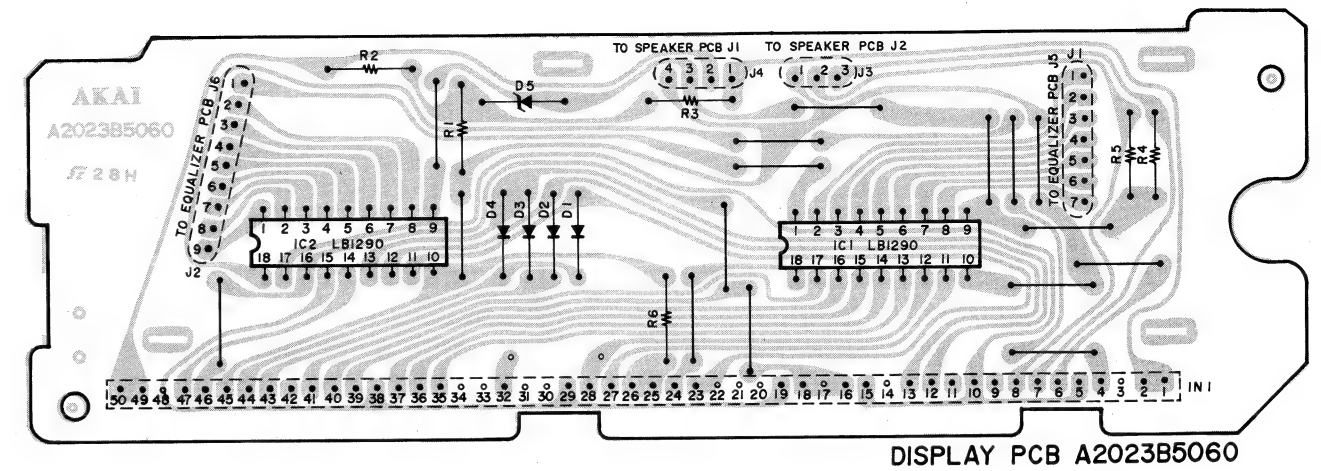




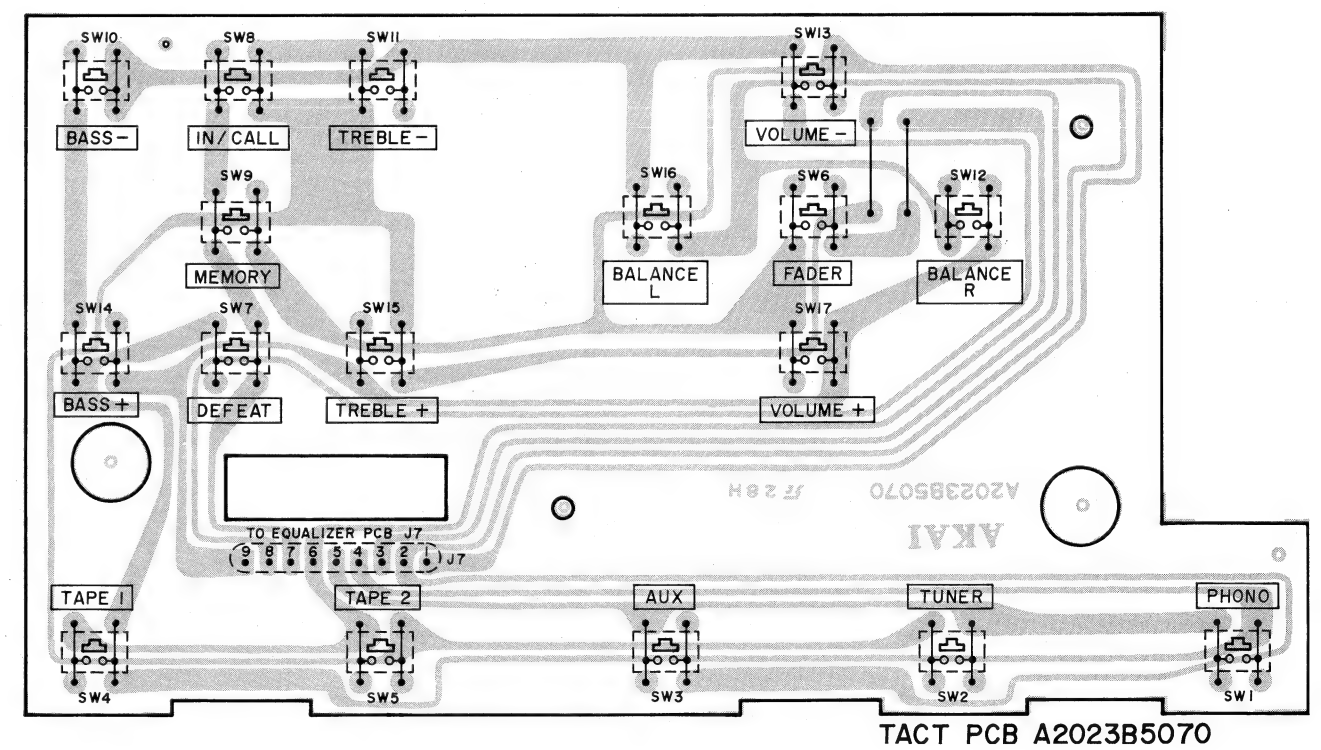
3) MODEL AM-M7 INPUT P.C BOARD A2023A5020B



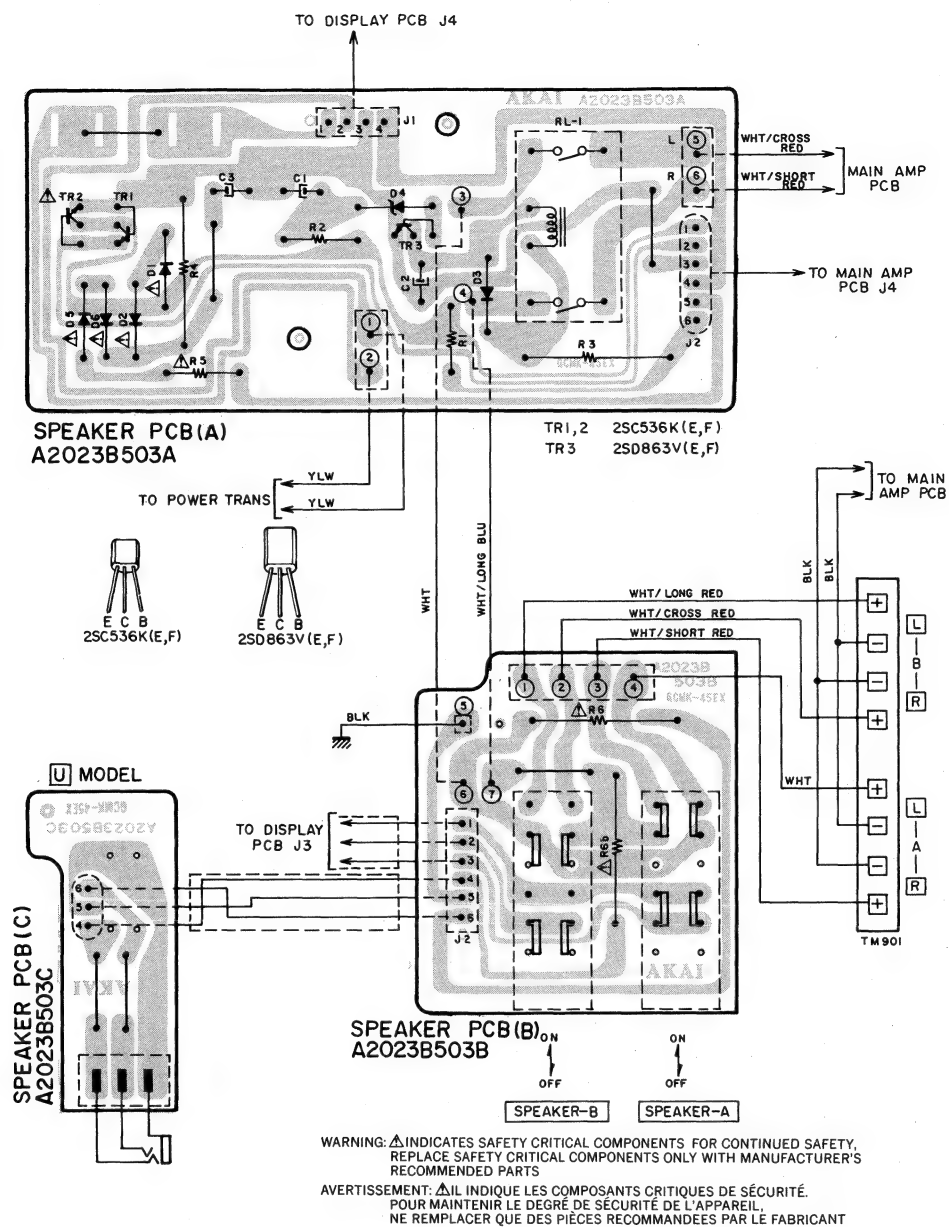
4) MODEL AM-M7 DISPLAY P.C BOARD A2023B5060



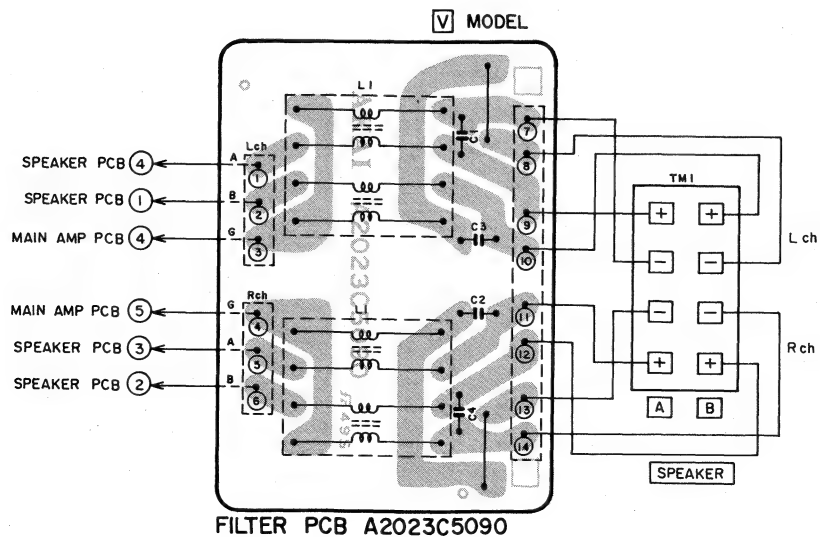
5) MODEL AM-M7 TACT P.C BOARD A2023B5070



6) MODEL AM-M7 SPEAKER P.C BOARD A2023B503A, B, C

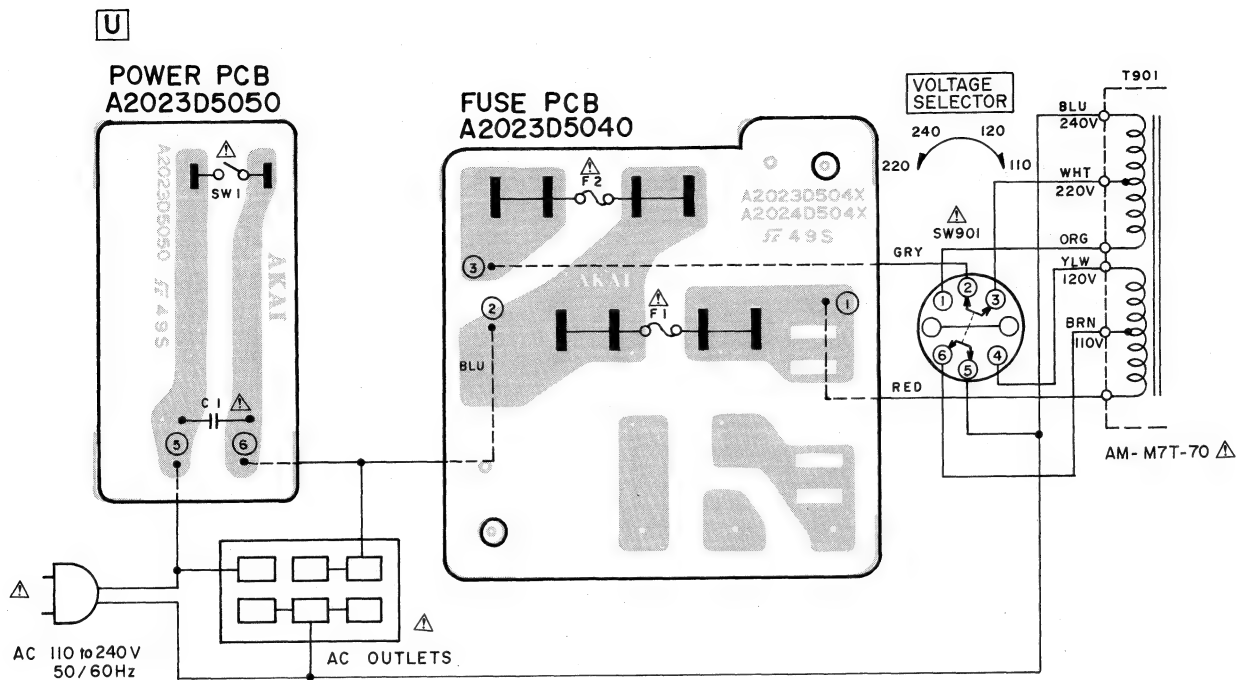


7) MODEL AM-M7 FILTER P.C BOARD A2023C5090



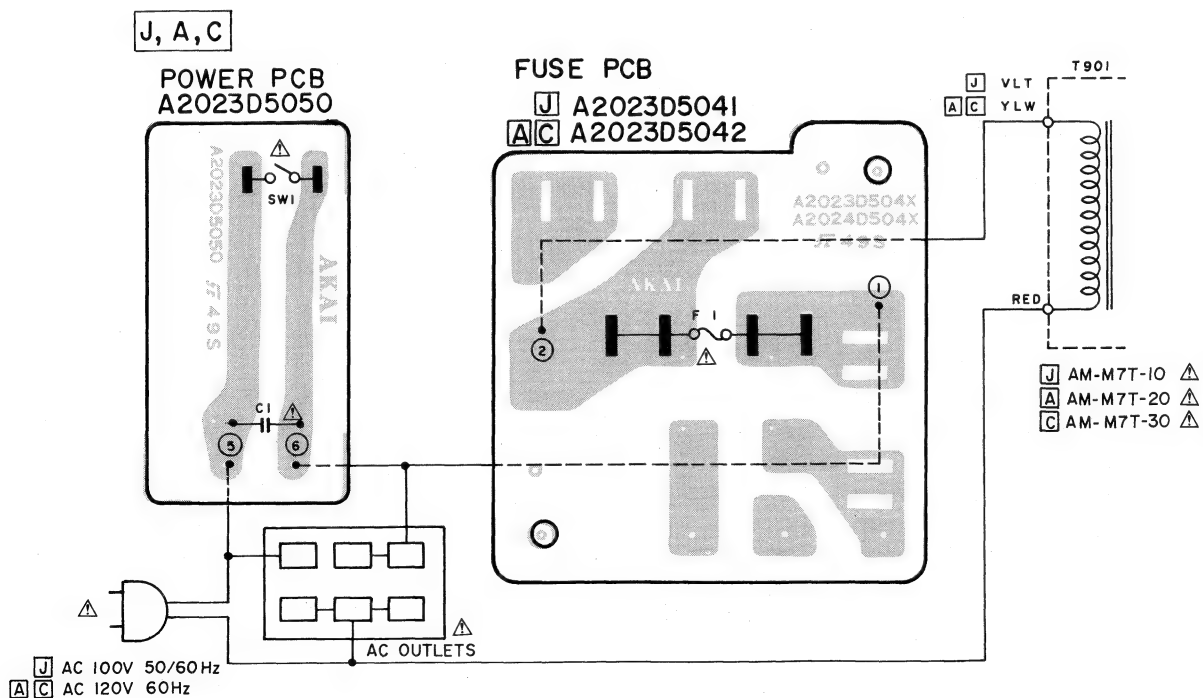
8) MODEL AM-M7 FUSE P.C BOARD A2023D5040

POWER P.C BOARD A2023D5050



9) MODEL AM-M7 FUSE P.C BOARD A2023D5041, 42

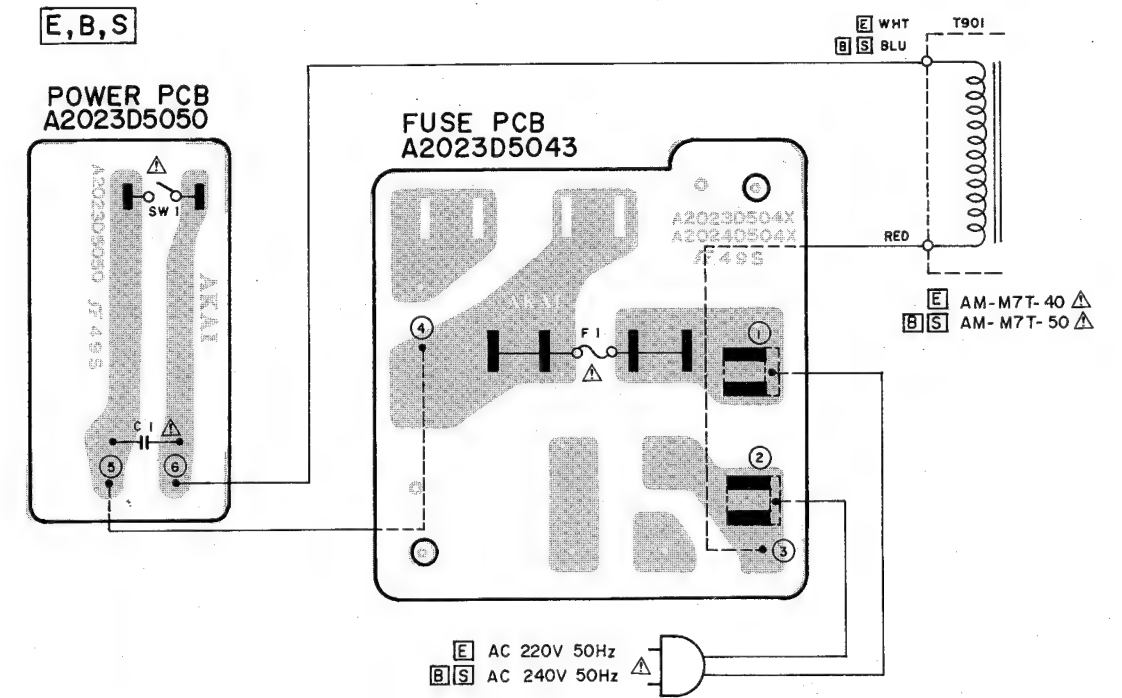
POWER P.C BOARD A2023D5050



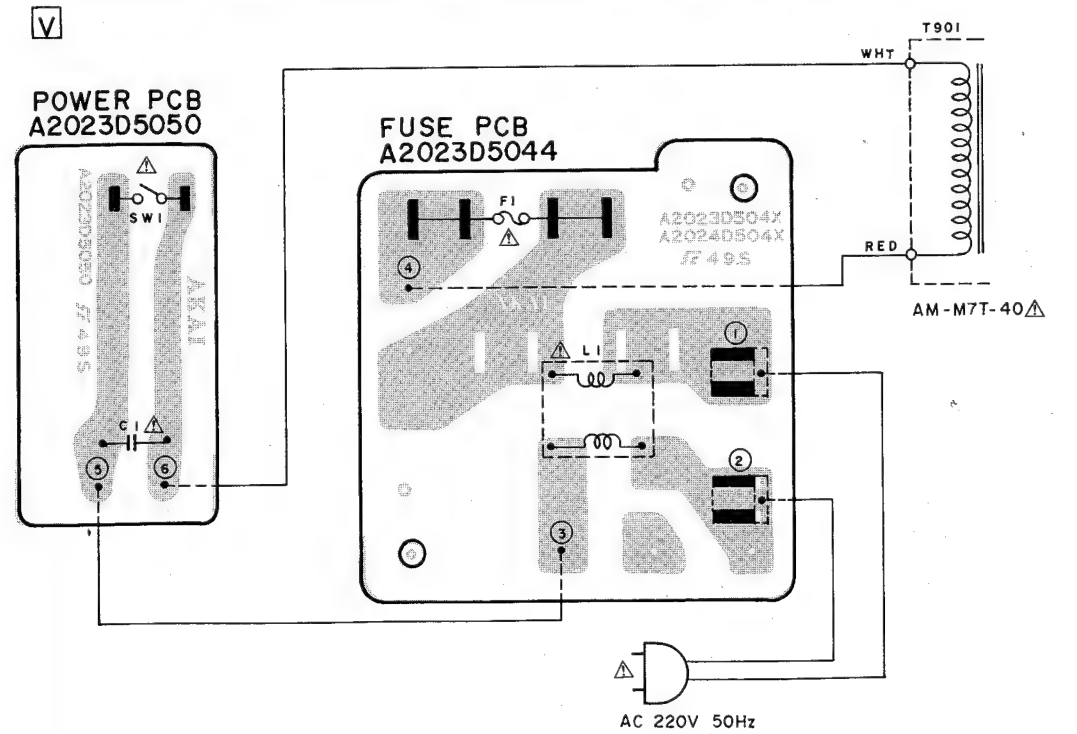
WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

10) MODEL AM-M7 FUSE P.C BOARD A2023D5043 POWER P.C BOARD A2023D5050



11) MODEL AM-M7 FUSE P.C BOARD A2023D5044 POWER P.C BOARD A2023D5050



WARNING: Δ INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS.

AVERTISSEMENT: Δ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÛRETÉ. POUR MAINTENIR LE DEGRÉ DE SÛRETÉ DE L'APPAREIL, NE REMPLACER LES COMPOSANTS DONT LE FONCTIONNEMENT EST CRITIQUE POUR LA SÛRETÉ QUE PAR DES PIÈCES RECOMMANDÉES PAR LE FABRICANT.

SECTION 4

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Resistor and Capacitor which is not listed in this parts list, please refer to
COMMON LIST FOR SERVICE PARTS.

ATTENTION

1. When placing an order for parts, be sure to list the parts no., model no., and description. There are instances in which if any of this information is omitted, parts cannot be shipped or the wrong parts will be delivered.
2. Please be careful not to make a mistake in the parts no. If the parts no. is in error, a part different from the one ordered may be delivered.
3. Because parts number and parts unit supply in the Preliminary Parts List may be partially changed, please use this parts list for all future reference.

HOW TO USE THIS PARTS LIST

1. This Parts List shows the parts that are considered necessary for repairs. Other parts, such as resistors and capacitors, are shown in the "Common List for Service Parts". Select and order such parts from the "Common List for Service Parts".
2. The Recommended Spare Parts shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not be supplied in principle.

4. How to read list

a) Mechanism Block

2. HEAD BASE BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|-------------------------|
| 2-1x | BH-T2023A320A | HEAD BASE BLOCK GX-F66R |
| 2-2 | HP-H2206A010A | HEAD R/P PR4-8FU C |
| 2-3 | ZS-477876 | PAN20x03STL CMT |
| 2-4 | ZS-536488 | BID20x08STL CMT |
| 2-5 | ZG-402895 | CS ANGLE ADJUST SPRING |

SP (Service Parts) Classification

A small "x" indicates the inability to show that particular part in the Photo or Illustration.

This number corresponds with the individual parts index number in that figure

This number corresponds with the Figure Number

b) P.C Board Block

6. SYS. CON. P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|---------------|---------------------------------|
| 6-1 | BA-T2034A070A | PC SYS CON BLK GX-F44R |
| 6-IC1 | EI-324536 | IC HD14049BP |
| 6-IC2 | EI-336801 | IC MB8841-564M |
| 6-IC3 | EI-331661 | IC SN7405N |
| 6-IC4 | EI-336725 | IC M54527P |
| 6-TR1to4 | ET-200985 | TR 2SC2603 F,G |
| 6-TR5to28 | ET-554657 | TR 2SA733A P,Q |
| 6-D1 | ED-318292 | D SILICON H 1S2473T-77 T26 |
| 6-D2to4 | ED-308952 | D GERMA V 1K34A-LR F07 |
| 6-D5to10 | ED-318292 | D SILICON H 1S2473T-77 T26 |
| 6-X1 | EI-318384 | OSC X'TAL NC-18C 3.579545MHZ |

SP (Service Parts) Classification

This reference numbers corresponds with symbol numbers of Schematic Diagrams.

5. Both the kind of part and installation position can be determined by the Parts Number. To determine where a parts number is listed, utilize Parts Index at end of Parts List. It is necessary first of all to find the Parts Number. This can be accomplished by using the Reference Number listed at right of parts number in the Parts Index.

WARNING

△ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS

AVERTISSEMENT

△ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

I. MODEL AT-M5/L

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---|
| 1 | BT-344374 | △ TRANS POWER AT-M5T-10 (J) |
| 2 | BT-344375 | △ TRANS POWER AT-M5T-20 (A) |
| 3 | BT-344376 | △ TRANS POWER AT-M5T-30 (C) |
| 4 | BT-344377 | △ TRANS POWER AT-M5T-40 (V) |
| 5 | BT-347888 | △ TRANS POWER AT-M5T-41 (E) |
| 6 | BT-344378 | △ TRANS POWER AT-M5T-50 (S,B) |
| 7 | BT-344379 | △ TRANS POWER AT-M5T-70 (U) |
| 8 | EC-330692 | C S-FIX H TZ03R200E 4.2-20 |
| 9 | EC-332222 | C S-FIX H TZ03R300E 5.2-30 |
| 10 | EC-337772 | C S-FIX H TZ03Z070E 2.0-7 |
| 11 | ED-336805 | △ D SILICON DS135D-KB1 200/1.0A |
| 12 | ED-330218 | △ D ZENER H HZ15L 2 |
| 13 | ED-344153 | △ D ZENER H 05Z30 Y |
| 14 | ED-344444 | D LED SLP-436B-01 AMBER |
| 15 | ED-301911 | D SILICON H DS448 |
| 16 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 17 | ED-336832 | D VARACTOR SVC211SP |
| 18 | ED-337605 | D VARACTOR SVC333 (A) DOUBLE |
| 19 | ED-323057 | D VARISTOR MV12 |
| 20 | ED-336944 | D ZENER H 05Z16 X,Y |
| 21 | ED-338049 | D ZENER H 05Z24 Y |
| 22 | ED-347701 | D ZENER H 05Z6.2 Z |
| 23 | EF-300599 | △ FUSE FST3100 T 250V 0.40A (E,V,S,E,B) |
| 24 | EF-336834 | △ FUSE FST3100 TIME 250V 0.16A (E,V,S,E,B) |
| 25 | EF-308933 | △ FUSE TSC A 250V 0.20A (U) |
| 26 | EF-308848 | △ FUSE TSC 125V 0.40A (C,A) |
| 27 | EI-322248 | IC LA1231N |
| 28 | EI-202218 | IC LA1245 |
| 29 | EI-343349 | IC LA3390 |
| 30 | EI-337013 | IC LB1290 |
| 31 | EI-330689 | IC LC4011B |
| 32 | EI-344436 | IC TC9147P |
| 33 | EI-344438 | IC TD6104P |
| 34 | EI-344437 | IC TD6301AP |
| 35 | EI-344422 | OSC X'TAL HC-18/U 7.200000MHz |
| 36 | EM-344372 | IND FL 9-BT-10ZYK CHARACTER |
| 37 | ER-344434 | FILTER CE BFU450C4N 0.450MHz |
| 38 | ER-338338 | FILTER CE MS36KY-A 10.7MHz |
| 39 | ER-336804 | FILTER CE SFE10.7MA8 10.7MHz |
| 40 | ER-344435 | FILTER CE SFU450B9 0.450MHz |
| 41 | ER-336830 | FILTER LC LP BL-34HD |
| 42 | ER-341654 | FILTER LC LP 42W-1001 |
| 43 | ER-315407 | FILTER CE SFE10.7MMKA 10.7MHz |
| 44 | ER-315045 | R CB H F10 RDS 1/4W 111J |
| 45 | ES-337902 | △ SW PUSH SDDL1P 01-1 |
| 46 | ES-344439 | SW SLIDE 00420451 2-04-02 |
| 47 | ES-344445 | SW TACT EVQ-QHR12B |
| 48 | ES-336780 | SW TACT KHH10902 |
| 49 | ET-322775 | △ TR 2SC536K-NP E,F,G |
| 50 | ET-452531 | △ TR 2SD313HP E,F |
| 51 | ET-655356 | △ TR 2SD571 L,M |
| 52 | ET-330588 | TR FET 2SK19 O,Y |
| 53 | ET-336937 | TR FET 2SK223 E,F |
| 54 | ET-337743 | TR FET 3SK107 E |
| 55 | ET-322778 | TR 2SA608K-NP E,F,G |
| 56 | ET-200505 | TR 2SC2603 E,F |
| 57 | ET-338410 | TR 2SC2878 A,B |
| 58 | ET-336869 | TR 2SC2999 C,D |
| 59 | ET-336935 | TR 2SC3000 E,F |
| 60 | ET-322775 | TR 2SC536K-NP E,F,G |
| 61 | ET-618873 | TR 2SC930 E,F |
| 62 | ET-328437 | TR 2SD1012-V F,G |
| 63 | ET-337744 | TR FET 2SK212 D,E |
| 64 | EV-337995 | R S-FIX H RVF8P01 3P 103 |
| 65 | EV-337993 | R S-FIX H RVF8P01 3P 203 |

1. TUNER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------------|-------------------------|
| 1-1 | BA-A3038A030A | PC TUNER BLK AT-M5 (U) |
| 1-2 | BA-A3038A030B | PC TUNER BLK AT-M5 (J) |
| 1-3 | BA-A3038A030C | PC TUNER BLK AT-M5 (C) |
| 1-4 | BA-A3038A030D | PC TUNER BLK AT-M5 (A) |
| 1-5 | BA-A3038A030E | PC TUNER BLK AT-M5 (E) |
| 1-6 | BA-A3038A030F | PC TUNER BLK AT-M5 (V) |
| 1-7 | BA-A3038A030GPC | TUNER BLK AT-M5 (S) |
| 1-8 | BA-A3038A030H | PC TUNER BLK AT-M5L (E) |
| 1-9 | BA-A3038A030J | PC TUNER BLK AT-M5L (B) |

TUNER P.C BOARD

| | | |
|------------|-----------|---------------------------------|
| 1-IC1 | EI-322248 | IC LA1231N |
| 1-IC2 | EI-343349 | IC LA3390 |
| 1-IC3 | EI-202218 | IC LA1245 |
| 1-IC4 | EI-344436 | IC TC9147P |
| 1-IC5 | EI-344437 | IC TD6301AP |
| 1-IC6 | EI-344438 | IC TD6104P |
| 1-IC7 | EI-337013 | IC LB1290 |
| 1-IC8 | EI-330689 | IC LC4011B |
| 1-TR1 | ET-337743 | TR FET 3SK107 E |
| 1-TR2 | ET-336869 | TR 2SC2999 C,D |
| 1-TR3 | ET-337744 | TR FET 2SK212 D,E |
| 1-TR4 | ET-618873 | TR 2SC930 E,F |
| 1-TR5 | ET-336935 | TR 2SC3000 E,F |
| 1-TR6to8 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR9 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR10 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR11 | ET-338410 | TR 2SC2878 A,B |
| 1-TR12to15 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR16 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR17 | ET-330588 | TR FET 2SK19 O,Y |
| 1-TR18to20 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR21 | ET-655356 | △ TR 2SD571 L,M |
| 1-TR22 | ET-452531 | △ TR 2SD313HP E,F |
| 1-TR23 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR24,25 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR26 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR27 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR28 | ET-322775 | △ TR 2SC536K-NP E,F,G |
| 1-TR29 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR30 | ET-322775 | △ TR 2SC536K-NP E,F,G |
| 1-TR31 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR32,33 | ET-328437 | TR 2SD1012-V F,G |
| 1-TR35 | ET-336937 | TR FET 2SK223 E,F |
| 1-TR36 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR37,38 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR39to42 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR44 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR46,47 | ET-322775 | TR 2SC536K-NP E,F,G |
| 1-TR48 | ET-322778 | TR 2SA608K-NP E,F,G |
| 1-TR51 | ET-200505 | TR 2SC2603 E,F |
| 1-D1toD4 | ED-336832 | D VARACTOR SVC211SP |
| 1-D5,6 | ED-301911 | D SILICON H DS448 |
| 1-D7,8 | ED-337605 | D VARACTOR SVC333 (A) DOUBLE |
| 1-D9 | ED-301911 | D SILICON H DS448 |
| 1-D10 | ED-323057 | D VARISTOR MV12 |
| 1-D11,12 | ED-301911 | D SILICON H DS448 |
| 1-D13 | ED-347701 | D ZENER H 05Z6.2 Z |
| 1-D14 | ED-330218 | △ D ZENER H HZ15L 2 |
| 1-D15to18 | ED-336805 | △ D SILICON DS135D-KB1 200/1.0A |
| 1-D19 | ED-336805 | D SILICON DS135D-KB1 200/1.0A |
| 1-D20 | ED-344153 | △ D ZENER H 05Z30 Y |
| 1-D21 | ED-338049 | D ZENER H 05Z24 Y |
| 1-D23,24 | ED-301911 | D SILICON H DS448 |
| 1-D25 | ED-336944 | D ZENER H 05Z16 X,Y |
| 1-D26,27 | ED-301911 | D SILICON H DS448 |
| 1-D29to40 | ED-301911 | D SILICON H DS448 |
| 1-D41,42 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 1-D45,46 | ED-301911 | D SILICON H DS448 |
| 1-VC1to4 | EC-337772 | C S-FIX H TZ03Z070E 2.0-7 |
| 1-VC5 | EC-330692 | C S-FIX H TZ03R200E 4.2-20 |

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 1-VC6 | EC-332222 | C S-FIX H TZ03R300E 5.2-30 M5L (E,B) ONLY |
| 1-L1 | EO-336872 | COIL VARI 2 TFEI-ANT-U EXCEPT (J) |
| 1-L1 | EO-336939 | COIL VARI 2 TFEI-ANT-J (J) ONLY |
| 1-L2 | EO-336873 | COIL VARI 2 TFEI-RF-1 |
| 1-L3 | EO-336938 | COIL VARI 2 TFEI-RF-2 |
| 1-L4 | EO-336871 | COIL VARI 2 TFEI-OSC-U EXCEPT (J) |
| 1-L4 | EO-336940 | COIL VARI 2 TFEI-OSC-J (J) ONLY |
| 1-L5 | EO-332120 | COIL FIX 2 103AK-005A 2.20μH |
| 1-L6 | EO-338409 | COIL LF FKOB 160MH02 250μH |
| 1-T1 | EO-337640 | COIL IFT 119AC-15533X 10.7MHz |
| 1-T2 | EO-344425 | COIL DET 2 77-1119-01 |
| 1-T3 | EO-344433 | COIL DET 2 77-1120-01 |
| 1-T4 | EO-337598 | COIL VARI 2 25A-1353-01 |
| 1-T5 | EO-337599 | COIL VARI 2 25A-1354-03 M5L (E,B) ONLY |
| 1-T6 | EO-348209 | COIL OSC 2 7NR-8646Y 115.0μH |
| 1-T7 | EO-307786 | COIL OSC 2 7NR-6722Y 580μH M5L (E,B) ONLY |
| 1-T8 | EO-343351 | COIL IFT PEGK0008B-01 455KHz |
| 1-T9 | EO-202216 | COIL IFT 7MC-6733C 460KHz |
| 1-FL1 | ER-315407 | FILTET CE SFE10.7MMKA 10.7MHz |
| 1-FL1E | ER-345729 | FILTER CE SFE10.7MZ1KA 10.7MHz M5L (E) ONLY |
| 1-FL2 | ER-336804 | FILTER CE SFE10.7MA8 10.7MHz EXCEPT (V) |
| 1-FL2 | ER-338338 | FILTER CE MS3GKY-A 10.7MHz M5 (V), M5L (E) |
| 1-FL3 | ER-341654 | FILTER LC LP 42W-1001 |
| 1-FL4 | ER-344434 | FILTER CE BFU450C4N 0.450MHz |
| 1-FL5 | ER-344435 | FILTER CE SFU450B9 0.450MHz |
| 1-FL6 | ER-336830 | FILTER LC LP BL-34HD (V) ONLY |
| 1-FL7 | ER-344435 | FILTER CE SFU450B9 0.450MHz M5L (E,B) ONLY |
| 1-VR1 | EV-337993 | R S-FIX H RVF8P01 3P 203 |
| 1-VR2 | EV-337995 | R S-FIX H RVF8P01 3P 103 |
| 1-R21,22 | ER-324480 | △ R CB H S10 FS RDS 1/4W 470J |
| 1-R32,33 | ER-324337 | △ R CB H S10 FS RDS 1/4W 560J |
| 1-R46,47 | ER-324337 | △ R CB H S10 FS RDS 1/4W 560J |
| 1-R60,61 | ER-324337 | △ R CB H S10 FS RDS 1/4W 560J |
| 1-R100 | ER-324185 | △ R CB H S10 FS RDS 1/4W 221J |
| 1-R101 | ER-324184 | △ R CB H S10 FS RDS 1/4W 121J |
| 1-R119 | ER-672816 | △ R CB H RD 1/2W 225J |
| 1-R120 | ER-322787 | △ R CB H S10 FS RDS 1/4W 100J |
| 1-R132 | ER-324934 | △ R CB H S10 FS RDS 1/4W 220J |
| 1-R133 | ER-323074 | △ R CB H S10 FS RDS 1/4W 102J |
| 1-R136 | ER-200944 | △ R CB H S10 FS RDS 1/4W 152J |
| 1-R140 | ER-328067 | △ R CB H S10 FS RDS 1/4W 331J |
| 1-R181 | ER-324934 | △ R CB H S10 FS RDS 1/4W 220J |
| 1-R251 | ER-328067 | △ R CB H S10 FS RDS 1/4W 331J |
| 1-C48,49 | EC-344155 | G PP V F05 PP 181J 50DC (U) ONLY |
| 1-C56 | EC-344486 | C PP V F05 PP 391J 50DC EXCEPT (C,A) |
| 1-C56 | EC-344478 | C PP V F05 PP 561J 50DC (C,A) ONLY |
| 1-C57 | EC-344486 | C PP V F05 PP 391J 50DC EXCEPT (C,A) |
| 1-C57 | EC-344478 | C PP V F05 PP 561J 50DC (C,A) ONLY |
| 1-C62,63 | EC-344484 | C PP V F05 PP 392J 50DC |
| 1-C65 | EC-344483 | C PP V F05 PP 102J 50DC |
| 1-C71 | EC-344481 | C PP V F05 PP 4700G 50DC |
| 1-C72 | EC-344482 | C PP V F05 PP 161J 50DC M5L (E,B) ONLY |
| 1-C114 | EC-320548 | △ C CE V F 103Z 250AC (U,J,C) |

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|---------------------------------------|
| 1-C114 | EC-338411 | △ C CE V FZ 103P 400AC (A) |
| 1-C114 | EC-338577 | △ C CE V F 472M 400AC (E) |
| 1-C114 | EC-338496 | △ C CE V FZ 472P 400AC (V,S,B) |
| 1-C123 | EC-344157 | C DOUBLE LAYER 473Z 5.5DC |
| 1-X1 | EI-344422 | OSC X'TAL HC-18/U 7.200000 MHz |
| 1-SW1 | ES-337902 | △ SW PUSH SDLD1P 01-1 |
| 1-SW2 | ES-344445 | SW TACT EVQ-QHR12B |
| 1-SW3 | ES-344439 | SW SLIDE 00420451 2-04-02 (U) ONLY |
| 1-TM1 | EJ-344423 | TERMINAL SCREW YKD31-0133 P 2P |

The AT-M5L AEF Model uses some different parts on TUNER P.C BOARD and OPERATION P.C BOARD. Please refer to the interchangeable parts list shown below when the replacement of these parts is necessary.

| AEF PARTS | | INTERCHANBEABLE PARTS | |
|----------------------|-----------|-----------------------------------|--|
| DESCRIPTION | PARTS NO. | DESCRIPTION | |
| TR JC501 O. P, Q, R | ET-322775 | TR 2SC536K-NP E, F, G | |
| E SILICON H 1N404G | ED-336805 | D SILICON DS135D-KB 1 200/1.0A | |
| D ZENER H BZX55-C6V2 | ED-347701 | D ZENER H 0526.2 Z | |
| D ZENER H BZX55-C30 | ED-344153 | D ZENER H 05230 Y | |
| D ZENER H BZX55-C24 | ED-338049 | D ZEENR H 05Z24 Y | |
| D ZENER H BZX55-C16 | ED-336944 | D ZENER H 05Z16 X, Y | |
| D SILICON H 1N4148 | ED-301911 | D SILICON H DS448 | |

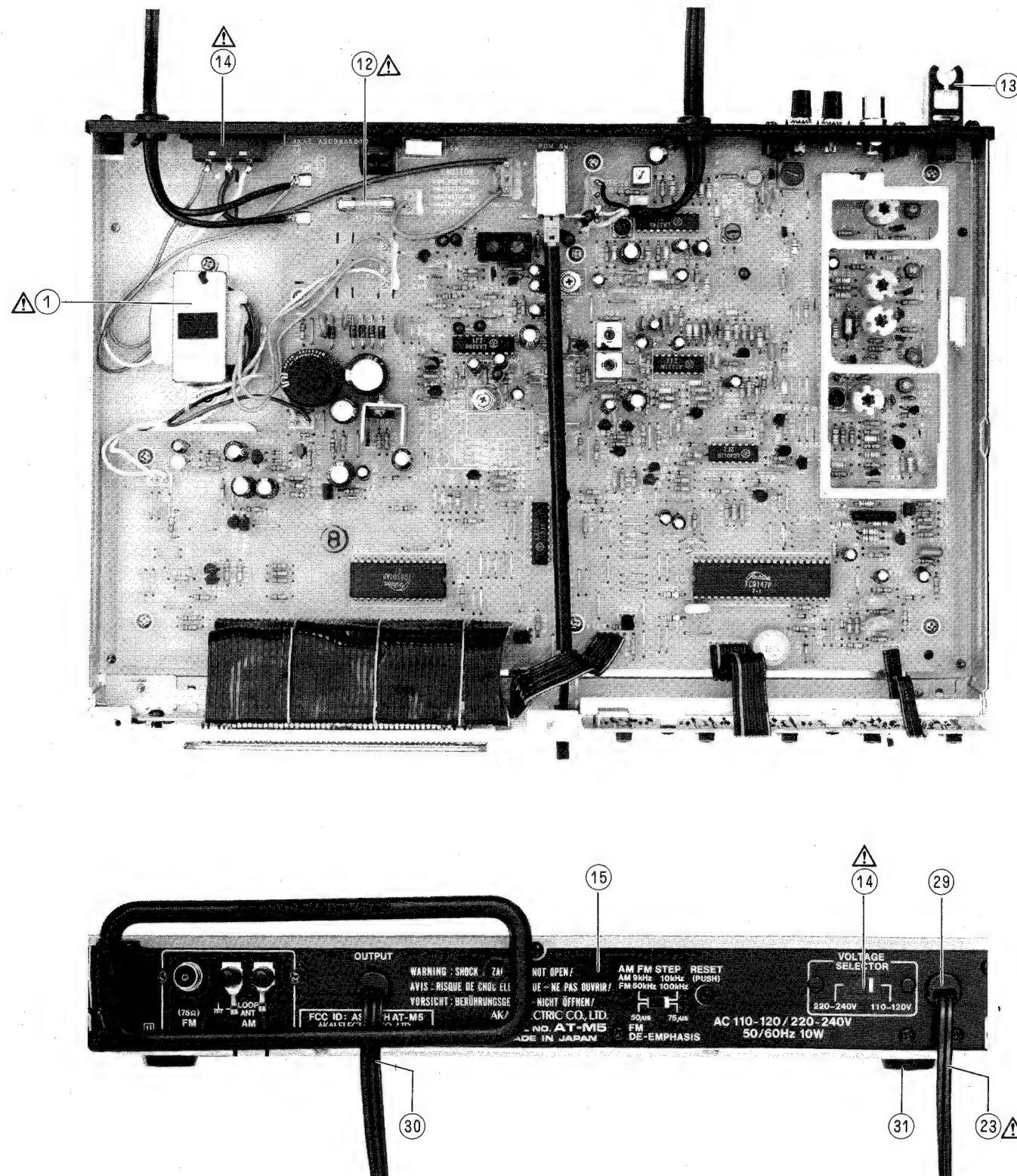
OPERATION P.C BOARD

| | | |
|------------|-----------|-------------------------|
| 1B-TR1,2 | ET-200505 | TR 2SC2603 E,F |
| 1B-D1to20 | ED-301911 | D SILICON H DS448 |
| 1B-D21to30 | ED-344444 | D LED SLP-436B-01 AMBER |
| 1B-SW1to10 | ES-336780 | SW TACT KHH10902 |

FLD P.C BOARD

| | | |
|------------|-----------|--|
| 1C-SW1to10 | ES-336780 | SW TACT KHH10902 (SW 10: AT-M5L ONLY) |
| 1C-IND1 | EM-344372 | IND FL 9-BT-10ZYK CHARACTER |

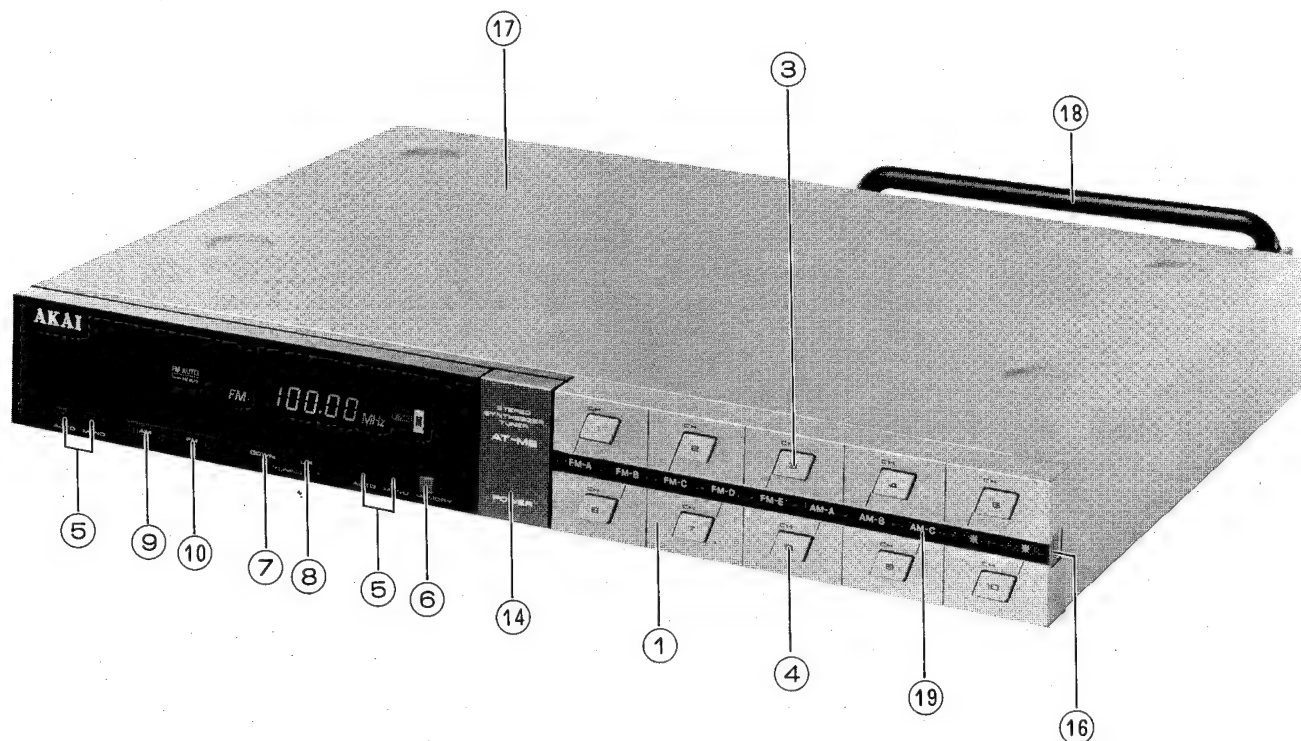
ASSEMBLY BLOCK



2. ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|--|
| 2-1 | BT-344379 | △ TRANS POWER AT-M5T-70 (U) |
| 2-2x | BT-344374 | △ TRANS POWER AT-M5T-10 (J) |
| 2-3x | BT-344376 | △ TRANS POWER AT-M5T-30 (C) |
| 2-4x | BT-344375 | △ TRANS POWER AT-M5T-20 (A) |
| 2-5x | BT-347888 | △ TRANS POWER AT-M5T-41 (E) |
| 2-6x | BT-344377 | △ TRANS POWER AT-M5T-40 (V) |
| 2-7x | BT-344378 | △ TRANS POWER AT-M5T-50 (S,B) |
| 2-8x | EF-308848 | △ FUSE TSC 125V 0.40A (F1,F2), (C,A) |
| 2-9x | EF-300599 | △ FUSE FST3100 T 250V 0.40A (F1,F2) (E,V,S,B) |
| 2-10x | EF-336834 | △ FUSE FST3100 TIME 250V 0.16A (F3) (E,V,S,B) |
| 2-11x | EF-336834 | △ FUSE FST3100 TIME 250V 0.16A (F4) (B) |
| 2-12 | EF-308933 | △ FUSE TSC A 250V 0.20A (F4) (U) |
| 2-13 | SZ-332739 | HOLDER ANTENNA |
| 2-14 | ES-348463 | △ SW SLIDE X012B11Y 01-2 |
| 2-15 | SP-344317A | PANEL REAR AT-M5 (U) |
| 2-16x | SP-344317E | PANEL REAR AT-M5 (J) |
| 2-17x | SP-344317B | PANEL REAR AT-M5 (C) |
| 2-18x | SP-344317H | PANEL REAR AT-M5 (A) |
| 2-19x | SP-344317C | PANEL REAR AT-M5 (E,V) |
| 2-20x | SP-344317D | PANEL REAR AT-M5 (S) |
| 2-21x | SP-344317F | PANEL REAR AT-M5L (E) |
| 2-22x | SP-344317G | PANEL REAR AT-M5L (B) |
| 2-23 | EW-374894 | △ AC CORD 2 CORES VM-0129A J VM-0129A J (U) |
| 2-24x | EW-524845 | △ AC CORD 2 CORES VM1165B J (J) |
| 2-25x | EW-305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (C,A) |
| 2-26x | EW-346251 | △ AC CORD 2 CORES VM0364, NR N/851 EV (E,V) |
| 2-27x | EW-336924 | △ AC CORD 2 CORES KP-560, LTSA-2F S (S) |
| 2-28x | EW-346249 | △ AC CORD R-5696 42/0.15x2 EV (B) |
| 2-29 | SZ-631945 | STRAIN RELIEF SR-4N-4 |
| 2-30 | EW-344432 | CORD SAF-029 3THROW |
| 2-31 | SA-305646 | RUBBER FOOT (A) (BLACK) |
| 2-32x | ZW-698308 | RV NYL30x055 BL |
| 2-33x | ZW-305013 | RV POP32 (A) |

FINAL ASSEMBLY BLOCK



3. FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION | REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|-------------------------|----------|------------|--------------------------|
| 3-1 | BD-A3038A020A | PANEL FRONT BLK AT-M5 | 3-11x | SK-344308A | KNOB BAND (B-1) (AT-M5L) |
| 3-2 | BD-A3038A020B | PANEL FRONT BLK AT-M5L | | | (LW) |
| 3-3 | SK-344314A | RUBBER BUTTON SHEET | 3-12x | SK-344308B | KNOB BAND (B-2) (AT-M5L) |
| | | MEMORY (A) | | | (MW) |
| 3-4 | SK-344314B | RUBBER BUTTON SHEET | 3-13x | SK-344308C | KNOB BAND (B-3) (AT-M5L) |
| | | MEMORY (B) | | | (FM) |
| 3-5 | SK-344307A | KNOB (A) | 3-14 | SK-344321 | KNOB POWER AT-M5 |
| 3-6 | SK-344307B | KNOB (B) | | | (AT-M5) (POWER) |
| 3-7 | SK-344306A | KNOB TUNING (L) (DOWN) | 3-15x | SK-344321B | KNOB POWER AT-M5L |
| 3-8 | SK-344306B | KNOB TUNING (R) (UP) | | | (AT-M5L) (POWER) |
| 3-9 | SK-344304A | KNOB BAND (A-1) (AT-M5) | 3-16 | SZ-344313 | HOLDER MEMORY |
| | | (AM) | 3-17 | BC-344323 | COVER UPPER |
| 3-10 | SK-344304B | KNOB BAND (A-2) (AT-M5) | 3-18 | EE-337976 | ANT LOOP LA-200A |
| | | (FM) | 3-19 | TA-346165 | STATION CARDS |

II. MODEL AM-M5

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 1 | BT-344365 | △ TRANS POWER AM-M5T-10 (J) |
| 2 | BT-344360 | △ TRANS POWER AM-M5T-20 (A) |
| 3 | BT-344367 | △ TRANS POWER AM-M5T-30 (C) |
| 4 | BT-344361 | △ TRANS POWER AM-M5T-40 (E,V) |
| 5 | BT-344363 | △ TRANS POWER AM-M5T-50 (B,S) |
| 6 | BT-344364 | △ TRANS POWER AM-M5T-70 (U) |
| 7 | ED-200213 | △ D SILICON DBA40C-K15 200/2.6A |
| 8 | ED-330218 | △ D ZENER H HZ15L 2 |
| 9 | ED-301911 | D SILICON H DS448 |
| 10 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 11 | ED-323057 | D VARISTER MV12 |
| 12 | ED-330218 | D ZENER H HZ15L 2 |
| 13 | ED-307752 | D ZENER H HZ6L B2 |
| 14 | ED-344937 | D ZENER H 05Z27 X |
| 15 | ED-347623 | D ZENER H 05Z6.2 Y,Z |
| 16 | EF-602550 | △ FUSE SEMKO T 250V 1.25A (F1) (E,V,B,S) |
| 17 | EF-601301 | △ FUSE SEMKO T 250V 2A (F4,5) (E,V,B,S) |
| 18 | EF-249851 | △ FUSE SEMKO T 250V 5A (F3) (E,V,B,S) |
| 19 | EF-311839 | △ FUSE TSC A 250V 1.6A (F1,2) (U) |
| 20 | EF-306951 | △ FUSE TSC A 250V 2.5A (F4,5) (U) |
| 21 | EF-306951 | △ FUSE TSC A 250V 2.5A (F4,5) (J) |
| 22 | EF-326639 | △ FUSE TSC A 250V 3.15A (F1) (J) |
| 23 | EF-326613 | △ FUSE TSC A 250V 5A (F3) (U) |
| 24 | EF-326613 | △ FUSE TSC A 250V 5A (F3) (J) |
| 25 | EF-306956 | △ FUSE TSC 125V 2.5A (F4,5) (C,A) |
| 26 | EF-323080 | △ FUSE TSC 125V 3.15A (F1) (C,A) |
| 27 | EF-346139 | △ FUSE TSC 125V 5A (F3) (C,A) |
| 28 | EI-346122 | △ IC STK-4833 |
| 29 | EI-343374 | IC AA-100 |
| 30 | EI-337013 | IC LB1290 |
| 31 | EI-338171 | IC LC4069UB |
| 32 | EI-346071 | IC M5218L-21 |
| 33 | EI-337228 | IC M5218L0 |
| 34 | EI-313797 | IC TC4001BP |
| 35 | EI-332259 | IC TC4052BP |
| 36 | EI-343371 | IC TC9154P |
| 37 | EI-343373 | IC TC9156P |
| 38 | EM-344388 | IND FL BG-137ZK CHARACTER |
| 39 | EO-338409 | △ COIL LF FK0B160MH02 250μH |
| 40 | ES-337902 | △ SW PUSH SDLD1P 01-1 |
| 41 | ES-346123 | △ SW SELECTA 0240#13 01-4 |
| 42 | ES-343377 | SW PUSH SUL232A 2 THROW |
| 43 | ES-344427 | SW REMOTE B SWR1150 L=150 |
| 44 | ES-344429 | SW REMOTE B SWR1168 L=168 |
| 45 | ES-344426 | SW REMOTE O SUFR32 3THROW |
| 46 | ES-347694 | SW REMOTE S SSR243556 04-3 |
| 47 | ES-344445 | SW TACT EVQ-QHR12B |
| 48 | ES-336780 | SW TACT KHH10902 |
| 49 | ET-322598 | △ TR 2SB632K E,F |
| 50 | ET-310148 | △ TR 2SD612K E,F |
| 51 | ET-323529 | TR 2SA608K-NP E,F |
| 52 | ET-316171 | TR 2SC536K-NP E,F |
| 53 | ET-322775 | TR 2SC536K-NP E,F,G |

1. MAIN AMP P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|-----------------------------------|
| 1-1 | BA-A2024A060A | PC MAIN AMP BLK AM-M5 (U) (U,J) |
| 1-2 | BA-A2024A060B | PC MAIN AMP BLK AM-M5 (C) (C,A) |
| 1-3 | BA-A2024A060C | PC MAIN AMP BLK AM-M5 (E) (E,B,S) |
| 1-4 | BA-A2024A060D | PC MAIN AMP BLK AM-M5 (V) (V) |

MAIN AMP P.C BOARD

| | | |
|----------|-----------|--------------------------------|
| 1-IC1 | EI-337228 | IC M5218L0 |
| 1-IC2 | EI-343371 | IC TC9154P |
| 1-IC3,4 | EI-343373 | IC TC9156P |
| 1-IC5 | EI-346122 | △ IC STK-4833 |
| 1-IC6 | EI-337228 | IC M5218L0 |
| 1-TR1 | ET-310148 | △ TR 2SD612K E,F |
| 1-TR2 | ET-322598 | △ TR 2SB632K E,F |
| 1-TR3 | ET-310148 | △ TR 2SD612K E,F |
| 1-TR4 | ET-323529 | TR 2SA608K-NP E,F |
| 1-TR5,6 | ET-316171 | TR 2SC536K-NP E,F |
| 1-TR7 | ET-323529 | TR 2SA608K-NP E,F |
| 1-D1,2 | ED-330218 | △ D ZENER H HZ15L 2 |
| 1-D3,4 | ED-307752 | D ZENER H HZ6L B2 |
| 1-D5 | ED-344937 | D ZENER H 05Z27 X |
| 1-D6 | ED-200213 | D SILICON DBA40C-K15 200/2.6A |
| 1-D7 | ED-330218 | D ZENER H HZ15L 2 |
| 1-D8 | ED-347623 | D ZENER H 05Z6.2 Y,Z |
| 1-D9,10 | ED-301911 | D SILICON H DS448 |
| 1-L1 | EO-337880 | COIL FIX 2 202AK-018 2.20μH |
| 1-R18 | ER-321153 | R OMF H S15 FS 1W 102J |
| 1-R24 | ER-200940 | R CB H S10 FS RDS 1/4W 561J |
| 1-R32 | ER-311685 | R CB H S15 FS RDS 1/2W 4R7J |
| 1-R38,39 | ER-323074 | R CB H S10 FS RDS 1/4W 102J |
| 1-R40 | ER-322787 | R CB H S10 FS RDS 1/4W 100J |
| 1-R43 | ER-324480 | R CB H S10 FS RDS 1/4W 470J |
| 1-FR1 | ER-328520 | △ R FUSE ERD2FC S10 1/4W 1000G |
| 1-FR2,3 | ER-319455 | △ R FUSE ERD2FC S10 1/4W 10R0G |
| 1-C11,12 | EC-343382 | C EC V CUT SM 682M 45.0DC |
| 1-C31,32 | EC-338380 | C EC V T05 NP SM 2R2M 50.0DC |
| 1-C33 | EC-343976 | C EC V T05 NP SM R22M 50.0DC |

2. EQUALIZER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|---------------------------------------|
| 2-1 | BA-A2024A070A | PC EQUALIZER BLK AM-M5 (U) (EXCEPT V) |
| 2-2 | BA-A2024A070B | PC EQUALIZER BLK AM-M5 (V) (V) |

EQUALIZER P.C BOARD

| | | |
|----------|-----------|----------------------------------|
| 2-IC1 | EI-343374 | IC AA-100 |
| 2-IC2 | EI-338171 | IC LC4069UB |
| 2-IC3 | EI-313797 | IC TC4001BP |
| 2-IC4 | EI-346071 | IC M5218L-21 |
| 2-IC5,6 | EI-332259 | IC TC4052BP |
| 2-TR1 | ET-322775 | TR 2SC536K-NP E,F,G |
| 2-TR2 | ET-316171 | TR 2SC536K-NP E,F |
| 2-TR3 | ET-322775 | TR 2SC536K-NP E,F,G |
| 2-TR4 | ET-316171 | TR 2SC536K-NP E,F |
| 2-D1to11 | ED-301911 | D SILICON H DS448 |
| 2-SW1 | ES-347694 | SW REMOTE S SSR243556 04-3 |
| 2-SW2 | ES-344445 | SW TACT EVQ-QHR12B |
| 2-J6 | EJ-344370 | PIN J YKC21-0081 P 6P |
| 2-J7to9 | EJ-344368 | PHONE J 3P HSJ0847-010 3.5 O |
| 2-T1 | EO-336833 | COIL IFT 7MC-7736Z 460KHz |
| 2-VL1 | EO-337684 | COIL FIX 2 FL12R751E 750μH (V) |
| 2-VL2,3 | EO-345918 | COIL FIX 1 LAL03KH 22.00μH K (V) |
| 2-R34,35 | ER-200941 | R CB H S10 FS RDS 1/4W 271J |
| 2-R41 | ER-325269 | R CB H S10 FS RDS 1/4W 222J |

INPUT P.C BOARD

| | | |
|----------|-----------|----------------------------------|
| 2-J10,11 | EJ-336915 | PIN J AJC-054-ABB P 4P |
| 2-VL4to7 | EO-345918 | COIL FIX 1 LAL03KH 22.00μH K (V) |

3. SPEAKER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------------------------|-----------|--------------------------------------|
| SPEAKER P.C BOARD | | |
| 3-SW1 | ES-343377 | SW PUSH SUL232A 2 THROW |
| 3-R1 | ER-308028 | R OMF H S15 FS 1W 181J |
| HEAD PHONE P.C BOARD | | |
| 3-VL1 | EO-336934 | COIL FIX 1 LAL03KH 2.2 μ H M (V) |
| 3-J2 | EJ-344369 | PHONE J 3P HSJ0857-110 3.5 O |

4. TACT P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|-----------|------------------|
| 4-SW1to17 | ES-336780 | SW TACT KHH10902 |

5. DISPLAY P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|--------------------------|--------------|---------------------------|
| 5-1 | BAA2024A100A | PC DISPLAY BLK AM-M5 |
| DISPLAY P.C BOARD | | |
| 5-IC1,2 | EI-337013 | IC LB1290 |
| 5-D1to4 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 5-D5 | ED-323057 | D VARISTER MV12 |
| 5-IND1 | EM-344388 | IND FL BG-137ZK CHARACTER |

6. FILTER P.C BOARD BLOCK (V Model Only)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-----------------------------------|
| 6-TM1 | EJ-343378 | TERMINAL PUSH SQ-2783#90 P 8P (V) |
| 6-L1 | EO-342936 | COIL BALUN (V) |

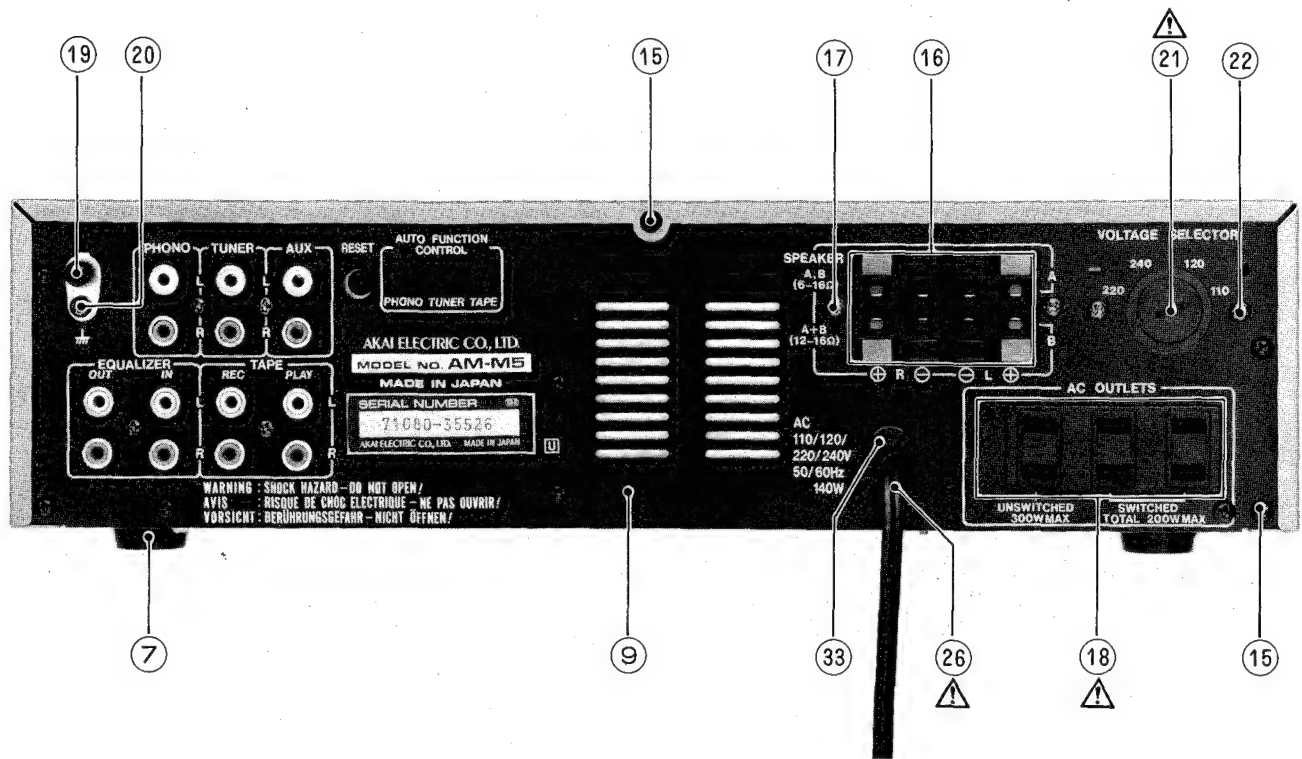
7. POWER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 7-SW1 | ES-337902 | Δ SW PUSH SDLD1P 01-1 |
| 7-C1U | EC-320548 | Δ C CE V F 103Z 250AC (U,J) |
| 7-C1C | EC-314688 | Δ C CE V FZ 103P 125AC (C,A) |
| 7-C1E | EC-338577 | Δ C CE V F 472M 400AC (E,V,B,S) |

8. FUSE P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|--|
| 8-L1 | EO-338409 | Δ COIL LF FK0B160MH02 250 μ H (V) |

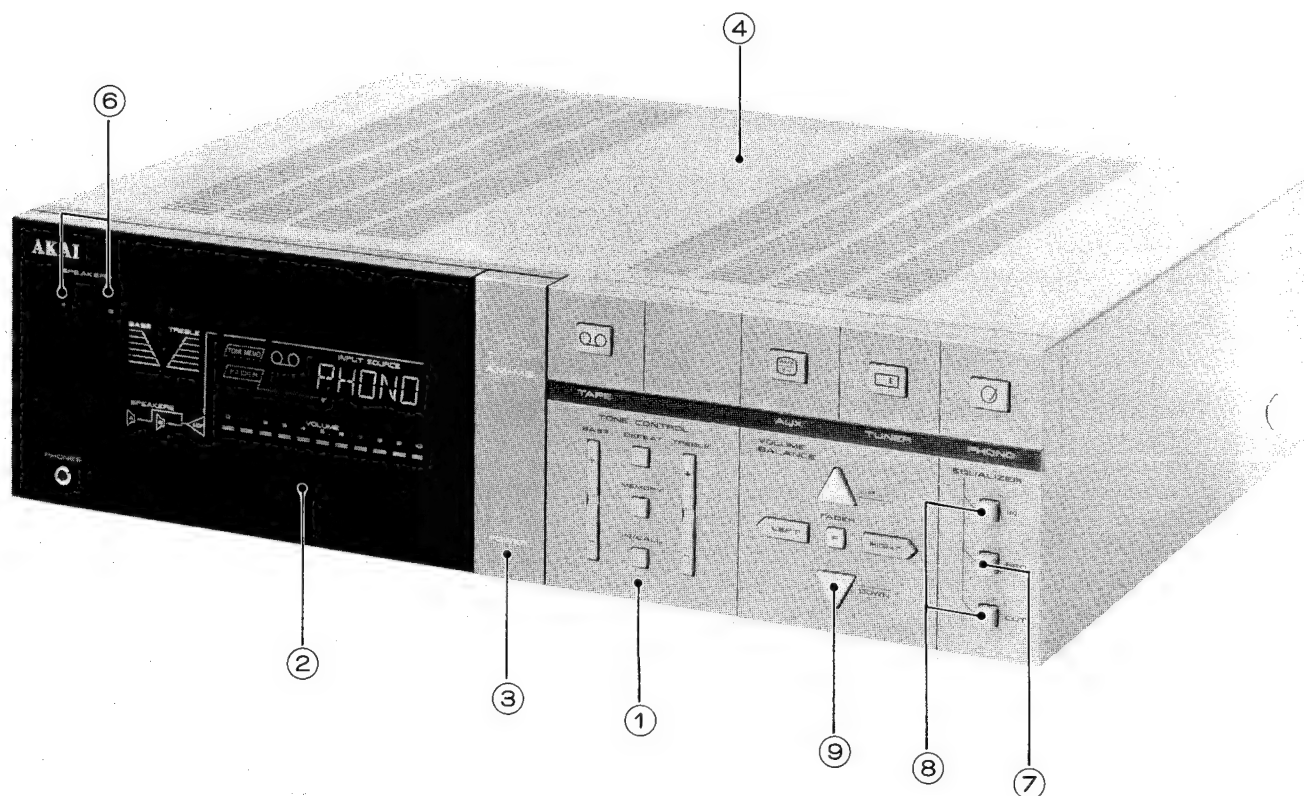
ASSEMBLY BLOCK



9. ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION | REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---|----------|-----------|---|
| 9-1x | BT-344364 | △ TRANS POWER AM-M5T-70 (T901) (U) | 9-27x | EW-524845 | △ AC CORD 2 CORES VM1165B J (J) |
| 9-2x | BT-344365 | △ TRANS POWER AM-M5T-10 (T901) (J) | 9-28x | EW-343363 | △ AC CORD 2 CORES KP-8, SPT-2 UC (C) |
| 9-3x | BT-344367 | △ TRANS POWER AM-M5T-30 (T901) (C) | 9-29x | EW-305691 | △ AC CORD 2 CORES KP-8, SPT-1 UC (A) |
| 9-4x | BT-344360 | △ TRANS POWER AM-M5T-20 (T901) (A) | 9-30x | EW-346251 | △ AC CORD 2 CORES VM0364, NR N/851 EV (E,V) |
| 9-5x | BT-344361 | △ TRANS POWER AM-M5T-40 (T901) (E,V) | 9-31x | EW-346249 | △ AC CORD R-5696 42/0.15x2 EV (B) |
| 9-6x | BT-344363 | △ TRANS POWER AM-M5T-50 (T901) (B,S) | 9-32x | EW-336924 | △ AC CORD 2 CORES KP-560, LTSA-2F S (S) |
| 9-7 | SA-202118 | FOOT | 9-33 | SZ-631945 | STRAIN RELIEF SR-4N-4 |
| 9-8x | ZS-498273 | T2BR30X08STL CMT PW080 | 9-34x | EF-311839 | △ FUSE TSC A 250V 1.6A (F1,2) (U) |
| 9-9 | SP-344346F | PANEL REAR AM-M5 (U) | 9-35x | EF-326613 | △ FUSE TSC A 250V 5A (F3) (U) |
| 9-10x | SP-344346K | PANEL REAR AM-M5 (J) | 9-36x | EF-306951 | △ FUSE TSC A 250V 2.5A (F4,5) (U) |
| 9-11x | SP-344346G | PANEL REAR AM-M5 (C) | 9-37x | EF-326639 | △ FUSE TSC A 250V 3.15A (F1) (J) |
| 9-12x | SP-344346L | PANEL REAR AM-M5 (A) | 9-38x | EF-326613 | △ FUSE TSC A 250V 5A (F3) (J) |
| 9-13x | SP-344346J | PANEL REAR AM-M5 (E,V) | 9-39x | EF-306951 | △ FUSE TSC A 250V 2.5A (F4,5) (J) |
| 9-14x | SP-344346H | PANEL REAR AM-M5 (B,S) | 9-40x | EF-323080 | △ FUSE TSC 125V 3.15A (F1) (C,A) |
| 9-15 | ZS-319460 | T2BR30X06STL BZN PROJECTION | 9-41x | EM-306139 | △ VU METER D34B80R 0.260MA (F3) (C,A) |
| 9-16 | EJ-343389 | TERMINAL PUSH SQ-2780#90 S 8P (TM901) (EXCEPT V) | 9-42x | EF-306956 | △ FUSE TSC 125V 2.5A (F4,5) (C,A) |
| 9-17 | ZS-309315 | T2BR30X10STL BNI | 9-43x | EF-602550 | △ FUSE SEMKO T 250V 1.25A (F1) (E,V,B,S) |
| 9-18 | EJ-336895 | △ SOCKET OUTLET S2T733T174 UJ 3x2P (J901) (U,J,C,A) | 9-44x | EF-249851 | △ FUSE SEMKO T 250V 5A (F3) (E,V,B,S) |
| 9-19 | EJ-329610 | TERMINAL W/SCREW UB-0067 L 1P (TM902) | 9-45x | EF-601301 | △ FUSE SEMKO T 250V 2A (F4,5) (E,V,B,S) |
| 9-20 | ZS-447761 | T2BR30X06STL BNI | 9-46x | ZW-698308 | △ RV NYL30x055 BL (A) |
| 9-21 | ES-346123 | △ SW SELECTA 0240#13 01-4 (SW901) (U) | 9-47x | ZW-305013 | △ RV POP32 (A) |
| 9-22 | ZS-463353 | T2BR30X08STL BNI | | | |
| 9-23x | ES-344426 | SW REMOTE O SUFR32 3 THROW | | | |
| 9-24x | ES-344427 | SW REMOTE B SWR1150 L=150 | | | |
| 9-25x | ES-344429 | SW REMOTE B SWR1168 L=168 | | | |
| 9-26 | EW-374894 | △ AC CORD 2 CORES VM-0129A J (U) | | | |

FINAL ASSEMBLY BLOCK



10. FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|---------------------------|
| 10-1 | BD-A2024A120A | PANEL FRONT BLK AM-M5 |
| 10-2 | SZ-344341B | WINDOW DISPLAY (2) |
| 10-3 | SK-344330B | KNOB POWER AM-M5 |
| 10-4 | BC-344348A | COVER UPPER (A) (U,J,C,A) |
| 10-5x | BC-344348B | COVER UPPER (B) (E,V,B,S) |
| 10-6 | SK-344331A | KNOB PUSH (1) |
| 10-7 | SK-344331B | KNOB PUSH (2) |
| 10-8 | SK-344331C | KNOB PUSH (3) |
| 10-9 | SK-344339B | RUBBER BUTTON SHEET |

OPERATION

III. MODEL AM-M7

RECOMMENDED SPARE PARTS

Because, if the parts listed below are on hand, almost any repair can be accomplished, we suggest that you stock these Recommended Spare Parts Items.

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------------|
| 1 | BT-344382 | △ TRANS POWER AM-M7T-10 (J) |
| 2 | BT-344385 | △ TRANS POWER AM-M7T-20 (A) |
| 3 | BT-344383 | △ TRANS POWER AM-M7T-30 (C) |
| 4 | BT-344386 | △ TRANS POWER AM-M7T-40 (E,V) |
| 5 | BT-344387 | △ TRANS POWER AM-M7T-50 (B,S) |
| 6 | BT-344381 | △ TRANS POWER AM-M7T-70 (U) |
| 7 | ED-200749 | △ D SILICON DBA60-K15 400/6.0A |
| 8 | ED-344178 | △ D ZENER H HZ18L 2 |
| 9 | ED-337153 | D SILICON H DS446FA5 F10 |
| 10 | ED-301911 | D SILICON H DS448 |
| 11 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 12 | ED-323057 | D VARISTER MV12 |
| 13 | ED-343410 | D ZENER H HZ6L A1 |
| 14 | ED-307752 | D ZENER H HZ6L B2 |
| 15 | ED-327042 | D ZENER H WZ-140 |
| 16 | ED-344937 | D ZENER H 05Z27 X |
| 17 | ED-347623 | D ZENER H 05Z6.2 Y,Z |
| 18 | EF-601301 | △ FUSE SEMKO T 250V 2A (E,V,B,S) |
| 19 | EF-249851 | △ FUSE SEMKO T 250V 5A (E,V,B,S) |
| 20 | EF-306951 | △ FUSE TSC A 250V 2.5A (U) |
| 21 | EF-306952 | △ FUSE TSC A 250V 4A (J) |
| 22 | EF-326613 | △ FUSE TSC A 250V 5A (J) |
| 23 | EF-306957 | △ FUSE TSC 125V 4A (C,A) |
| 24 | EF-346139 | △ FUSE TSC 125V 5A (C,A) |
| 25 | EI-343390 | △ IC STK-1050 |
| 26 | EI-343374 | IC AA-100 |
| 27 | EI-337013 | IC LB1290 |
| 28 | EI-338171 | IC LC4069UB |
| 29 | EI-337228 | IC M5218L0 |
| 30 | EI-323563 | IC STK-3042 |
| 31 | EI-313797 | IC TC4001BP |
| 32 | EI-332259 | IC TC4052BP |
| 33 | EI-343371 | IC TC9154P |
| 34 | EI-343373 | IC TC9156P |
| 35 | EM-344388 | IND FL BG-137ZK CHARACTER |
| 36 | EP-344440 | RELAY SIG G2V-282P 2TR 24V |
| 37 | EP-337159 | RELAY SIG G4Z-2282P 2NO 24V |
| 38 | ES-337902 | △ SW PUSH SDLD1P 01-1 |
| 39 | ES-347694 | SW REMOTE S SSR243556 04-3 |
| 40 | ES-344445 | SW TACT EVQ-QHR12B |
| 41 | ES-336780 | SW TACT KHH10902 |
| 42 | ET-322598 | △ TR 2SB632K E,F |
| 43 | ET-344176 | △ TR 2SD313HP F |
| 44 | ET-310148 | △ TR 2SD612K E,F |
| 45 | ET-337234 | TR FET 2SK270 GR,BL |
| 46 | ET-305463 | TR 2SA970 GR,BL |
| 47 | ET-307195 | TR 2SC2240 GR,BL |
| 48 | ET-316171 | TR 2SC536K-NP E,F |
| 49 | ET-621235 | TR 2SC536NP E,F,G |
| 50 | ET-328440 | TR 2SD863-V8 E,F |

1. MAIN AMP P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|---------------------------|
| 1-1 | BA-A2023A060A | PC MAIN AMP BLK AM-M7 (U) |
| 1-2 | BA-A2023A060B | PC MAIN AMP BLK AM-M7 (J) |
| 1-3 | BA-A2023A060C | PC MAIN AMP BLK AM-M7 (C) |
| 1-4 | BA-A2023A060D | PC MAIN AMP BLK AM-M7 (E) |
| | | (E,V,B,S) |

MAIN AMP P.C BOARD

| | | |
|----------|-----------|------------------------------|
| 1-IC1 | EI-337228 | IC M5218L0 |
| 1-IC2 | EI-343371 | IC TC9154P |
| 1-IC3,4 | EI-343373 | IC TC9156P |
| 1-IC5 | EI-323563 | IC STK-3042 |
| 1-IC6 | EI-343390 | △ IC STK-1050 |
| 1-IC7 | EI-337228 | IC M5218L0 |
| 1-TR1 | ET-310148 | △ TR 2SD612K E,F |
| 1-TR2 | ET-322598 | △ TR 2SB632K E,F |
| 1-TR3 | ET-344176 | △ TR 2SD313HP F |
| 1-TR4 | ET-305463 | TR 2SA970 GR,BL |
| 1-TR5to7 | ET-307195 | TR 2SC2240 GR,BL |
| 1-D1,2 | ED-307752 | D ZENER H HZ6L B2 |
| 1-D3,4 | ED-344178 | △ D ZENER H HZ18L 2 |
| 1-D5 | ED-344937 | D ZENER H 05Z27 X |
| 1-D6to9 | ED-301911 | D SILICON H DS448 |
| 1-D10 | ED-200749 | △ D SILICON DBA60-K15 |
| | | 400/6.0A |
| 1-L1 | EO-337880 | COIL FIX 2 202AK-018 2.20μH |
| 1-R20,21 | ER-328065 | R CB H S10 FS RDS 1/4W 182J |
| 1-R26,27 | ER-324480 | R CB H S10 FS RDS 1/4W 470J |
| 1-R30 | ER-324934 | R CB H S10 FS RDS 1/4W 220J |
| 1-R40,41 | ER-325269 | R CB H S10 FS RDS 1/4W 222J |
| 1-R44,46 | ER-325269 | R CB H S10 FS RDS 1/4W 222J |
| 1-R47,48 | ER-308875 | R CB H S15 FS RDS 1/2W 100J |
| 1-R58 | ER-337773 | R OMF H S15 FS 1W 222J |
| 1-FR1,2 | ER-344161 | △ R FUSE ERD2FC S10 1/4W |
| | | 82R0G |
| 1-FR3 | ER-337756 | △ R FUSE ERD2FC S10 1/4W |
| | | 4700G |
| 1-FR5,6 | ER-319455 | △ R FUSE ERD2FC S10 1/4W |
| | | 10R0G |
| 1-C11,12 | EC-345776 | C EC V CUT SM 103M 50DC |
| 1-C27,28 | EC-325320 | C EC V F05 NP AWA 2R2M 50DC |
| 1-C29 | EC-343855 | C EC V F05 NP SM R22M 50.0DC |
| 1-C33 | EC-334012 | C EC V CUT NP SM 221M 6.3DC |

2. EQUALIZER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|---------------|----------------------------|
| 2-1 | BA-A2023A080A | PC EQUALIZER BLK AM-M7 (U) |
| | | (EXCEPT V) |
| 2-2 | BA-A2023A080B | PC EQUALIZER BLK AM-M7 (V) |
| | | (V) |

EQUALIZER P.C BOARD

| | | |
|-----------|-----------|----------------------------|
| 2-IC1 | EI-343374 | IC AA-100 |
| 2-IC2 | EI-338171 | IC LC4069UB |
| 2-IC3 | EI-313797 | IC TC4001BP |
| 2-IC4 | EI-337228 | IC M5218L0 |
| 2-IC5to7 | EI-332259 | IC TC4052BP |
| 2-TR1,2 | ET-316171 | TR 2SC536K-NP E,F |
| 2-TR3 | ET-621235 | TR 2SC536NP E,F,G |
| 2-TR4 | ET-316171 | TR 2SC536K-NP E,F |
| 2-TR5 | ET-337234 | TR FET 2SK270 GR,BL |
| 2-TR6 | ET-316171 | TR 2SC536K-NP E,F |
| 2-D1to11 | ED-301911 | D SILICON H DS448 |
| 2-D12 | ED-347623 | D ZENER H 05Z6.2 Y,Z |
| 2-D13,14 | ED-343410 | D ZENER H HZ6L A1 |
| 2-D15to18 | ED-301911 | D SILICON H DS448 |
| 2-VL1 | EO-337684 | COIL FIX 2 FL12R751E 750μH |
| | | (V) |
| 2-VL2,3 | EO-345918 | COIL FIX 1 LAL03KH 22.00μH |
| | | K (V) |

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-------------------------------|
| 2-T1 | EO-336833 | COIL IFT 7MC-7736Z 460KHz |
| 2-J1 | EJ-344370 | PIN J YKC21-0081 P 6P |
| 2-J2to4 | EJ-344368 | PHONE J 3P HSJ0847-010 3.5 O |
| 2-SW2 | ES-347694 | SW REMOTE S SSR243556 04-3 |
| 2-SW3 | ES-344445 | SW TACT EVQ-QHR12B |
| 2-RL1 | EP-344440 | RELAY SIG G2V-282P 2TR 24V |
| 2-R42,43 | ER-200940 | △ R CB H S10 FS RDS 1/4W 561J |
| 2-R58,59 | ER-325269 | R CB H S10 FS RDS 1/4W 222J |
| 2-FR1 | ER-328520 | R FUSE ERD2FC S10 1/4W 1000G |
| 2-C7 | EC-344157 | C DOUBLE LAYER 473Z 5.5DC |
| 2-C19 | EC-325320 | C EC V F05 NP AWA 2R2M 50DC |

INPUT P.C BOARD

| | | |
|----------|-----------|------------------------------|
| 2-VL4to9 | EO-345918 | COIL FIX 1 LAL03KH 22.00μH K |
| 2-J8to10 | EJ-336915 | PIN J AJC-054-ABB P 4P |

MM/MC P.C BOARD

| | | |
|-------|-----------|-----------------------|
| 2-SW1 | ES-344430 | SW PUSH JK1044 04-2 S |
|-------|-----------|-----------------------|

3. SPEAKER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|------------------------------|-----------|--------------------------------|
| SPEAKER P.C BOARD (A) | | |
| 3-TR1,2 | ET-316171 | TR 2SC536K-NP E,F |
| 3-TR3 | ET-328440 | TR 2SD863-V8 E,F |
| 3-D1to3 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 3-D4 | ED-327042 | D ZENER H WZ-140 |
| 3-D5,6 | ED-337153 | D SILICON H DS446FA5 F10 |
| 3-RL1 | EP-337159 | RELAY SIG G4Z-2282P 2NO 24V |
| 3-R3 | ER-333067 | R OMF H S20 FS 2W 821J |
| 3-R4 | ER-333044 | R OMF H S20 FS 2W 152J |
| 3-R5 | ER-322787 | R CB H S10 FS RDS 1/4W 100J |
| SPEAKER P.C BOARD (B) | | |
| 3-SW1 | ES-343377 | SW PUSH SUL232A 2 THROW |
| 3-J3 | EJ-344369 | PHONE J 3P HSJ0857-110 3.5 O |
| 3-R6 | ER-305722 | △ R OMF H S20 FS 2W 221J |
| SPEAKER P.C BOARD (C) | | |
| 3-L1 | EO-336934 | COIL FIX 1 LAL03KH 2.2μH M (V) |

4. TACT P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-----------|-----------|------------------|
| 4-SW1to17 | ES-336780 | SW TACT KHH10902 |

5. DISPLAY P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|--------------------------|---------------|---------------------------|
| 5-1 | BA-A2023A100A | PC DISPLAY BLK AM-M7 |
| DISPLAY P.C BOARD | | |
| 5-IC1,2 | EI-337013 | IC LB1290 |
| 5-D1to4 | ED-200469 | D SILICON H DS448 FA5 F10 |
| 5-D5 | ED-323057 | D VARISTER MV12 |
| 5-IND1 | EM-344388 | IND FL BG-137ZK CHARACTER |

6. FILTER P.C BOARD BLOCK (V Model Only)

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-----------------------------------|
| 6-TM1 | EJ-343378 | TERMINAL PUSH SQ-2783#90 P 8P (V) |
| 6-L1 | EO-342936 | COIL BALUN (V) |

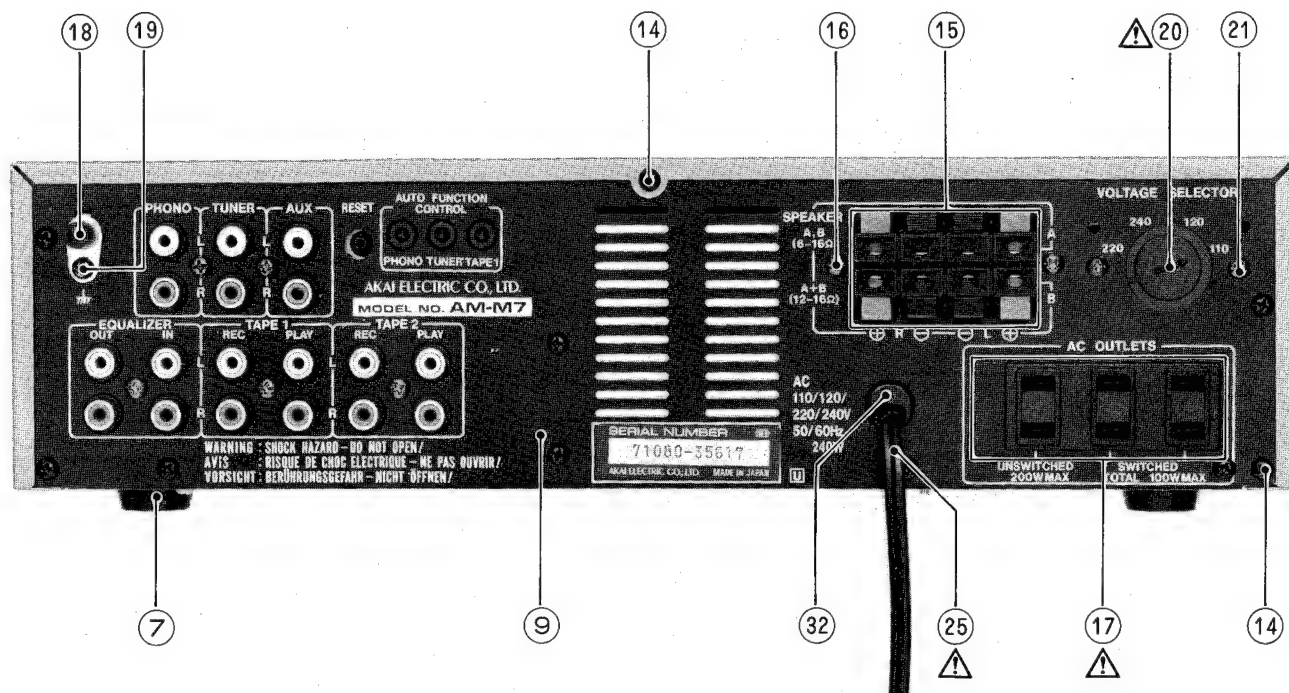
7. POWER P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|----------------------------------|
| 7-SW1 | ES-337902 | △ SW PUSH SDLD1P 01-1 |
| 7-C1U | EC-320548 | △ C CE V F 103Z 250AC (U,J) |
| 7-C1C | EC-314688 | △ C CE V FZ 103P 125AC (C,A) |
| 7-C1E | EC-338411 | △ C CE V FZ 103P 400AC (E,V,B,S) |

8. FUSE P.C BOARD BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|----------|-----------|-------------------------------|
| 8-L1 | EO-338409 | COIL LF FKOB160MH02 250μH (V) |

ASSEMBLY BLOCK

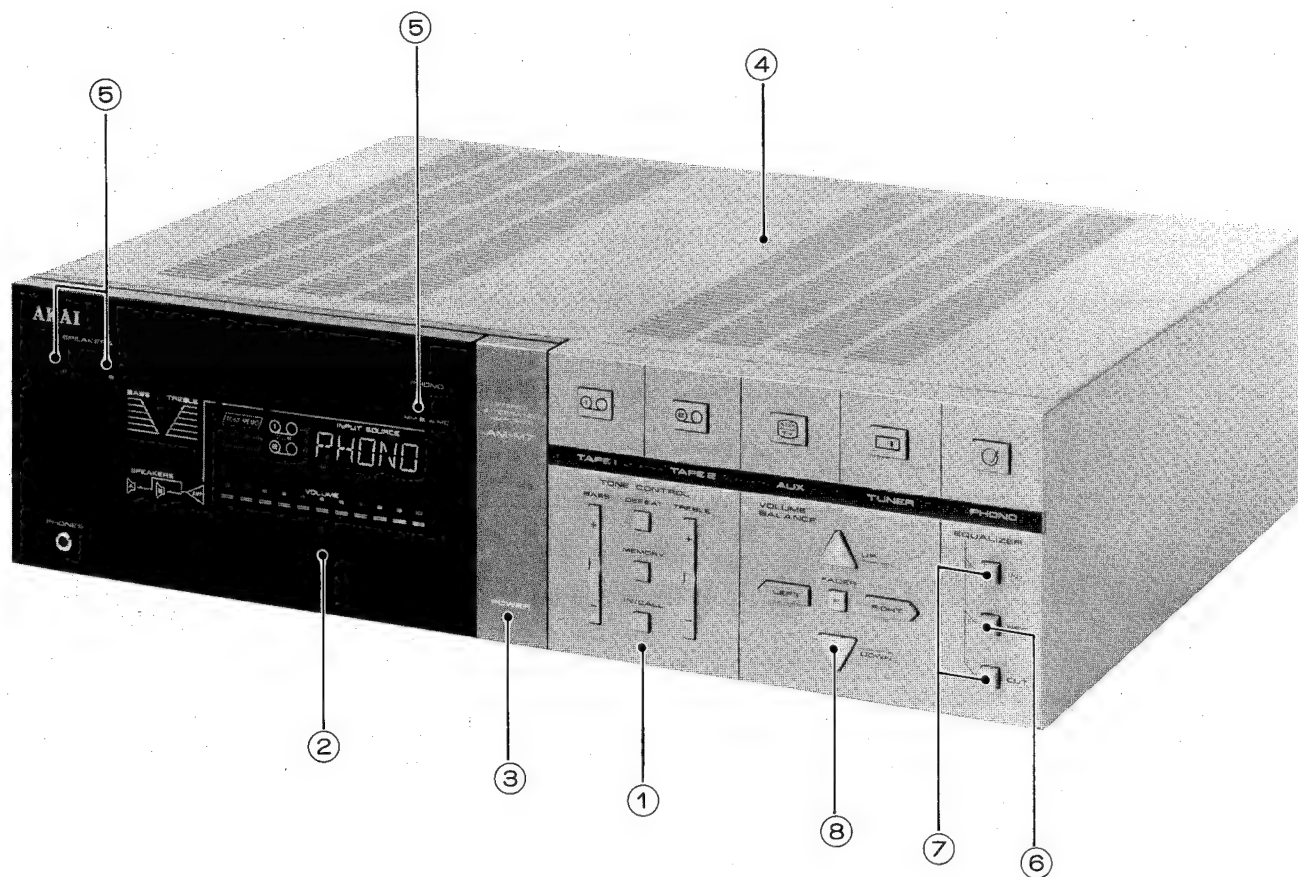


9. ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION | REF. NO. | PARTS NO. | DESCRIPTION |
|----------|------------|---|----------|-----------|---|
| 9-1x | BT-344381 | ⚠ TRANS POWER AM-M7T-70 (T901) (U) | 9-22x | ES-344426 | SW REMOTE O SUFR32 3THROW |
| 9-2x | BT-344382 | ⚠ TRANS POWER AM-M7T-10 (T901) (J) | 9-23x | ES-344442 | SW REMOTE B SWR1192 L=192 |
| 9-3x | BT-344383 | ⚠ TRANS POWER AM-M7T-30 (T901) (C) | 9-24x | ES-344443 | SW REMOTE B SWR1174 L=174 |
| 9-4x | BT-344385 | ⚠ TRANS POWER AM-M7T-20 (T901) (A) | 9-25 | EW-374894 | ⚠ AC CORD 2 CORES VM-0129A J (U) |
| 9-5x | BT-344386 | ⚠ TRANS POWER AM-M7T-40 (T901) (E,V) | 9-26x | EW-524845 | ⚠ AC CORD 2 CORES VM1165B J (J) |
| 9-6x | BT-344387 | ⚠ TRANS POWER AM-M7T-50 (T901) (B,S) | 9-27x | EW-343363 | ⚠ AC CORD 2 CORES KP-8, SPT-2 UC (C) |
| 9-7 | SA-202118 | FOOT | 9-28x | EW-305691 | ⚠ AC CORD 2 CORES KP-8, SPT-1 UC (A) |
| 9-8x | ZS-498273, | T2BR30x08STL CMT PW080 | 9-29x | EW-346251 | ⚠ AC CORD 2 CORES VM0364, NR N/851 EV (E,V) |
| 9-9 | SP-344346A | PANEL REAR AM-M7 (U) | 9-30x | EW-346249 | ⚠ AC CORD R-5696 42/0.15x2 EV (B) |
| 9-10x | SP-344346B | PANEL REAR AM-M7 (C,A) | 9-31x | EW-336924 | ⚠ AC CORD 2 CORES KP-560, LTSA-2F S (S) |
| 9-11x | SP-344346C | PANEL REAR AM-M7 (E,V) | 9-32 | SZ-631945 | STRAIN RELIEF SR-4N-4 |
| 9-12x | SP-344346D | PANEL REAR AM-M7 (B,S) | 9-33x | EF-306951 | ⚠ FUSE TSC A 250V 2.5A (F1,2) (U) |
| 9-13x | SP-344346E | PANEL REAR AM-M7 (J) | 9-34x | EF-306952 | ⚠ FUSE TSC A 250V 4A (F1) (J) |
| 9-14 | ZS-319460 | T2BR30x06STL BZN | 9-35x | EF-326613 | ⚠ FUSE TSC A 250V 5A (F3,4) (J) |
| 9-15 | EJ-343389 | TERMINAL PUSH SQ-2780#90 S 8P (TM901) (EXCEPT V) | 9-36x | EF-306957 | ⚠ FUSE TSC 125V 4A (F1) (C,A) |
| 9-16 | ZS-309315 | T2BR30x10STL BNI | 9-37x | EF-346139 | ⚠ FUSE TSC 125V 5A (F3,4) (C,A) |
| 9-17 | EJ-336895 | ⚠ SOCKET OUTLET S2T733T174 UJ 3x2P (J901) (U,J,C,A) | 9-38x | EF-601301 | ⚠ FUSE SEMKO T 250V 2A (F1) (E,V,B,S) |
| 9-18 | EJ-329610 | TERMINAL W/SCREW UB-0067 L 1P (TM902) | 9-39x | EF-249851 | ⚠ FUSE SEMKO T 250V 5A (F3,4) (E,V,B,S) |
| 9-19 | ZS-447761 | T2BR30x06STL BNI | 9-40x | ZW-698308 | ⚠ RV NYL30x055 BL (A) |
| 9-20 | ES-346123 | ⚠ SW SELECTA 0240#13 01-4 (SW901) (U) | 9-41x | ZW-305013 | ⚠ RV POP32 (A) |
| 9-21 | ZS-463353 | T2BR30x08STL BNI | | | |

PARTS LIST AM-M5/M7

FINAL ASSEMBLY BLOCK



10. FINAL ASSEMBLY BLOCK

| REF. NO. | PARTS NO. | DESCRIPTION |
|-------------|---------------|--------------------------------------|
| 10-1 | BD-A2023A120A | PANEL FRONT BLK AM-M7 |
| 10-2 | SZ-344341A | WINDOW DISPLAY (1) |
| 10-3 | SK-344330 | KNOB POWER AM-M7 |
| 10-4 | BC-344348C | COVER UPPER (C) |
| 10-5 | SK-344331A | KNOB PUSH (1) |
| 10-6 | SK-344331B | KNOB PUSH (2) |
| 10-7 | SK-344331C | KNOB PUSH (3) |
| 10-8 | SK-344339A | RUBBER BUTTON SHEET OPERATION (1) |

INDEX

1. MODEL AT-M5/L

| PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. |
|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|----------|
| BA-A3038A030A 1-1 | | ED-301911 | 1-D5,6 | EO-336939 | 1-L1 | ET-200505 | 1-TR51 | EW-524845 | 2-24x |
| BA-A3038A030B 1-2 | | ED-301911 | 1-D26,27 | EO-336940 | 1-L4 | ET-322775 | 1-TR28 | SA-305646 | 2-31 |
| BA-A3038A030C 1-3 | | ED-301911 | 1-D45,46 | EO-337598 | 1-T4 | ET-322775 | 1-TR27 | SK-344304A | 3-9 |
| BA-A3038A030D 1-4 | | ED-301911 | 1-D23,24 | EO-337599 | 1-T5 | ET-322775 | 1-TR6to8 | SK-344304B | 3-10 |
| BA-A3038A030E 1-5 | | ED-301911 | 1-D11,12 | EO-337640 | 1-T1 | ET-322775 | 1-TR24,25 | SK-344306A | 3-7 |
| BA-A3038A030F 1-6 | | ED-323057 | 1-D10 | EO-338409 | 1-L6 | ET-322775 | 1-TR29 | SK-344306B | 3-8 |
| BA-A3038A030G 1-7 | | ED-330218 | 1-D14 | EO-343351 | 1-T8 | ET-322775 | 1-TR46,47 | SK-344307A | 3-5 |
| BA-A3038A030H 1-8 | | ED-336805 | 1-D15to18 | EO-344425 | 1-T2 | ET-322775 | 1-TR10 | SK-344307B | 3-6 |
| BA-A3038A030J 1-9 | | ED-336805 | 1-D19 | EO-344433 | 1-T3 | ET-322775 | 1-TR18to20 | SK-344308A | 3-11x |
| BC-344323 | 3-17 | ED-336832 | 1-D1toD4 | EO-348209 | 1-T6 | ET-322775 | 1-TR36 | SK-344308B | 3-12x |
| BD-A3038A020A 3-1 | | ED-336944 | 1-D25 | ER-200944 | 1-R136 | ET-322775 | 1-TR44 | SK-344308C | 3-13x |
| BD-A3038A020B 3-2 | | ED-337605 | 1-D7,8 | ER-315407 | 1-FL1 | ET-322775 | 1-TR16 | SK-344314A | 3-3 |
| BT-344374 | 2-2x | ED-338049 | 1-D21 | ER-322787 | 1-R120 | ET-322775 | 1-TR30 | SK-344314B | 3-4 |
| BT-344375 | 2-4x | ED-344153 | 1-D20 | ER-323074 | 1-R133 | ET-322775 | 1-TR39to42 | SK-344321 | 3-14 |
| BT-344376 | 2-3x | ED-344444 | 1BD21to30 | ER-324184 | 1-R101 | ET-322778 | 1-TR9 | SK-344321B | 3-15x |
| BT-344377 | 2-6x | ED-347701 | 1-D13 | ER-324185 | 1-R100 | ET-322778 | 1-TR37,38 | SP-344317A | 2-15 |
| BT-344378 | 2-7x | EE-337976 | 3-18 | ER-324337 | 1-R46,47 | ET-322778 | 1-TR12to15 | SP-344317B | 2-17x |
| BT-344379 | 2-1 | EF-300599 | 1-9x | ER-324337 | 1-R60,61 | ET-322778 | 1-TR23 | SP-344317C | 2-19x |
| BT-347888 | 2-5x | EF-308848 | 2-8x | ER-324337 | 1-R32,33 | ET-322778 | 1-TR31 | SP-344317D | 2-20x |
| EC-320548 | 1-C114 | EF-308933 | 2-12 | ER-324480 | 1-R21,22 | ET-322778 | 1-TR48 | SP-344317E | 2-16x |
| EC-330692 | 1-VC5 | EF-336834 | 2-11x | ER-324934 | 1-R132 | ET-322778 | 1-TR26 | SP-344317F | 2-21x |
| EC-332222 | 1-VC6 | EF-336834 | 2-10x | ER-324934 | 1-R181 | ET-328437 | 1-TR32,33 | SP-344317G | 2-22x |
| EC-337772 | 1-VC1to4 | EI-202218 | 1-IC3 | ER-328067 | 1-R140 | ET-330588 | 1-TR17 | SP-344317H | 2-18x |
| EC-338411 | 1-C114 | EI-322248 | 1-IC1 | ER-328067 | 1-R251 | ET-336869 | 1-TR2 | SZ-332739 | 2-13 |
| EC-338496 | 1-C114 | EI-330689 | 1-IC8 | ER-336804 | 1-FL2 | ET-336935 | 1-TR5 | SZ-344313 | 3-16 |
| EC-338577 | 1-C114 | EI-337013 | 1-IC7 | ER-336830 | 1-FL6 | ET-336937 | 1-TR35 | SZ-631945 | 2-29 |
| EC-344155 | 1-C48,49 | EI-343349 | 1-IC2 | ER-338338 | 1-FL2 | ET-337743 | 1-TR1 | TA-346165 | 3-19 |
| EC-344157 | 1-C123 | EI-344422 | 1-X1 | ER-341654 | 1-FL3 | ET-337744 | 1-TR3 | ZW-305013 | 2-33x |
| EC-344478 | 1-C57 | EI-344436 | 1-IC4 | ER-344434 | 1-FL4 | ET-338410 | 1-TR11 | ZW-698308 | 2-32x |
| EC-344478 | 1-C56 | EI-344437 | 1-IC5 | ER-344435 | 1-FL7 | ET-452531 | 1-TR22 | | |
| EC-344481 | 1-C71 | EI-344438 | 1-IC6 | ER-344435 | 1-FL5 | ET-618873 | 1-TR4 | | |
| EC-344482 | 1-C72 | EJ-344423 | 1-TM1 | ER-345729 | 1-FL1E | ET-655356 | 1-TR21 | | |
| EC-344483 | 1-C65 | EM-344372 | 1C-IND1 | ER-672816 | 1-R119 | EV-337993 | 1-VR1 | | |
| EC-344484 | 1-C62,63 | EO-202216 | 1-T9 | ES-336780 | 1CSW1to10 | RV-337995 | 1-VR2 | | |
| EC-344486 | 1-C57 | EO-307786 | 1-T7 | ES-336780 | 1BSW1to10 | EW-305691 | 2-25x | | |
| EC-344486 | 1-C56 | EO-332120 | 1-L5 | ES-337902 | 1-SW1 | EW-336924 | 2-27x | | |
| ED-200469 | 1-D41,42 | EO-336871 | 1-L4 | ES-344439 | 1-SW3 | EW-344432 | 2-30 | | |
| ED-301911 | 1-D9 | EO-336872 | 1-L1 | ES-344445 | 1-SW2 | EW-346249 | 2-28x | | |
| ED-301911 | 1-D29to40 | EO-336873 | 1-L2 | ES-348463 | 2-14 | EW-346251 | 2-26x | | |
| ED-301911 | 1BD1to20 | EO-336938 | 1-L3 | ET-200505 | 1B-TR1,2 | EW-374894 | 2-23 | | |

2. MODEL AM-M5

| PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. | PARTS NO. | REF. NO. |
|--------------------|----------|-----------|----------|-----------|-----------|------------|----------|------------|----------|
| BA-A2024A060A 1-1 | | ED-344937 | 1-D5 | EJ-344369 | 3-J2 | ES-346123 | 9-21 | SP-344346L | 9-12x |
| BA-A2024A060B 1-2 | | ED-347623 | 1-D8 | EJ-344370 | 2-J6 | ES-347694 | 2-SW1 | SZ-344341B | 10-2 |
| BA-A2024A060C 1-3 | | EF-249851 | 9-44x | EM-306139 | 9-41x | ET-310148 | 1-TR1 | SZ-631945 | 9-33 |
| BA-A2024A060D 1-4 | | EF-306951 | 9-36x | EM-344388 | 5-IND1 | ET-310148 | 1-TR3 | ZS-309315 | 9-17 |
| BA-A2024A070A 2-1 | | EF-306951 | 9-39x | EO-336833 | 2-T1 | ET-316171 | 1-TR5,6 | ZS-319460 | 9-15 |
| BA-A2024A070B 2-2 | | EF-306956 | 9-42x | EO-336934 | 3-VL1 | ET-316171 | 2-TR2 | ZS-447761 | 9-20 |
| BA-A2024A100A 5-1 | | EF-311839 | 9-34x | EO-337684 | 2-VL1 | ET-316171 | 2-TR4 | ZS-463353 | 9-22 |
| BC-344348A 10-4 | | EF-323080 | 9-40x | EO-337880 | 1-L1 | ET-322598 | 1-TR2 | ZS-498273 | 9-8x |
| BC-344348B 10-5x | | EF-326613 | 9-35x | EO-338409 | 8-L1 | ET-322775 | 2-TR1 | ZW-305013 | 9-47x |
| BD-A2024A120A 10-1 | | EF-326613 | 9-38x | EO-342936 | 6-L1 | ET-322775 | 2-TR3 | ZW-698308 | 9-46x |
| BT-344360 | 9-4x | EF-326639 | 9-37x | EO-345918 | 2-VL2,3 | ET-323529 | 1-TR4 | | |
| BT-344361 | 9-5x | EF-601301 | 9-45x | EO-345918 | 2-VL4to7 | ET-323529 | 1-TR7 | | |
| BT-344363 | 9-6x | EF-602550 | 9-43x | ER-200940 | 1-R24 | EW-305691 | 9-29x | | |
| BT-344364 | 9-1x | EI-313797 | 2-IC3 | ER-200941 | 2-R34,35 | EW-336924 | 9-32x | | |
| BT-344365 | 9-2x | EI-332259 | 2-IC5,6 | ER-308028 | 3-R1 | EW-343363 | 9-28x | | |
| BT-344367 | 9-3x | EI-337013 | 5-IC1,2 | ER-311685 | 1-R32 | EW-346249 | 9-31x | | |
| EC-314688 | 7-C1C | EI-337228 | 1-IC6 | ER-319455 | 1-FR2,3 | EW-346251 | 9-30x | | |
| EC-320548 | 7-C1U | EI-337228 | 1-IC1 | ER-321153 | 1-R18 | EW-374894 | 9-26 | | |
| EC-338380 | 1-C31,32 | EI-338171 | 2-IC2 | ER-322787 | 1-R40 | EW-524845 | 9-27x | | |
| EC-338577 | 7-C1E | EI-343371 | 1-IC2 | ER-323074 | 1-R38,39 | SA-202118 | 9-7 | | |
| EC-343382 | 1-C11,12 | EI-343373 | 1-IC3,4 | ER-324480 | 1-R43 | SK-344330B | 10-3 | | |
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| ED-323057 | 5-D5 | EJ-343378 | 6-TM1 | ES-344427 | 9-24x | SP-344346H | 9-14x | | |
| ED-330218 | 1-D1,2 | EJ-343389 | 9-16 | ES-344429 | 9-25x | SP-344346J | 9-13x | | |
| ED-330218 | 1-D7 | EJ-344368 | 2-J7to9 | ES-344445 | 2-SW2 | SP-344346K | 9-10x | | |

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| BD-A2023A120A | 10-1 | ER-333044 | 3-R4 | | | | | | |
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| BT-344385 | 9-4x | ER-344161 | 1-FR1,2 | | | | | | |
| BT-344386 | 9-5x | ES-336780 | 4-SW1to17 | | | | | | |
| BT-344387 | 9-6x | ES-337902 | 7-SW1 | | | | | | |
| EC-314688 | 7-C1C | ES-343377 | 3-SW1 | | | | | | |
| EC-320548 | 7-C1U | ES-344426 | 9-22x | | | | | | |
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| ED-301911 | 1-D6to9 | ET-316171 | 2-TR4 | | | | | | |
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| ED-307752 | 1-D1,2 | ET-322598 | 1-TR2 | | | | | | |
| ED-323057 | 5-D5 | ET-328440 | 3-TR3 | | | | | | |
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| ED-347623 | 2-D12 | EW-343363 | 9-27x | | | | | | |
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| EO-337684 | 2-VL1 | | | | | | | | |
| EO-337880 | 1-L1 | | | | | | | | |
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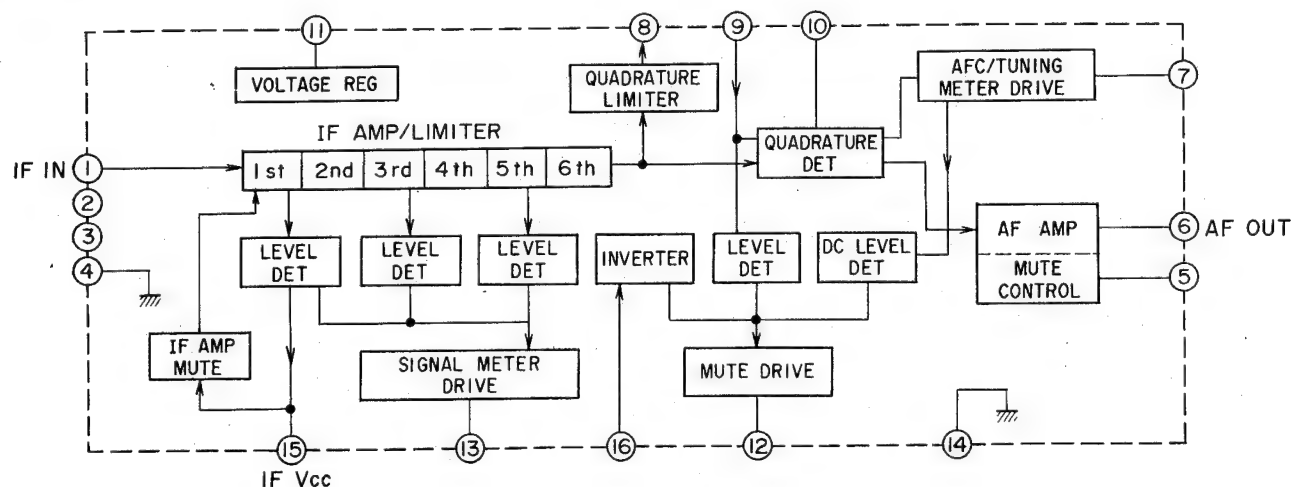
SECTION 5

SCHEMATIC DIAGRAM

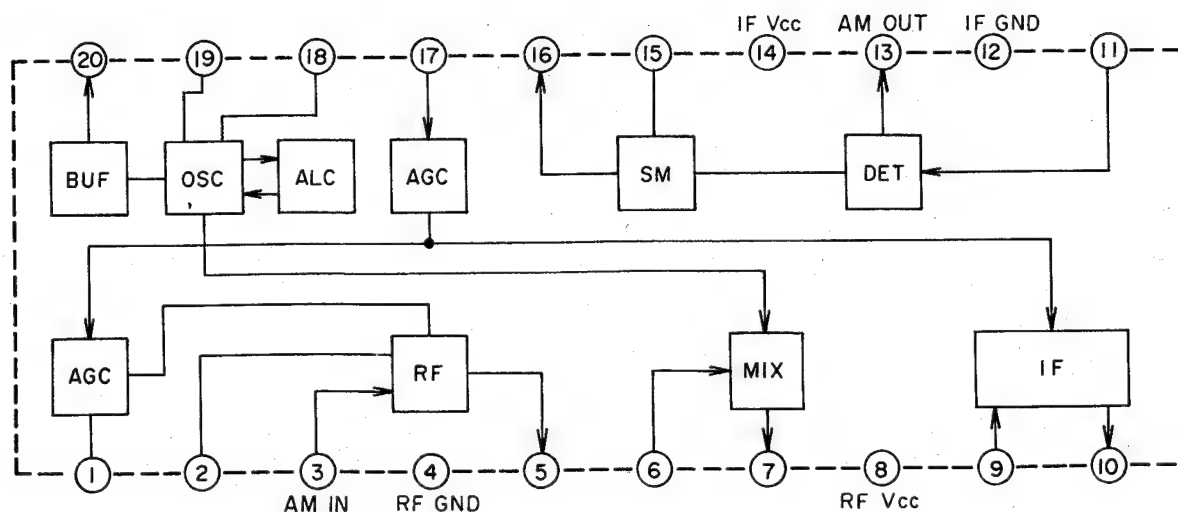
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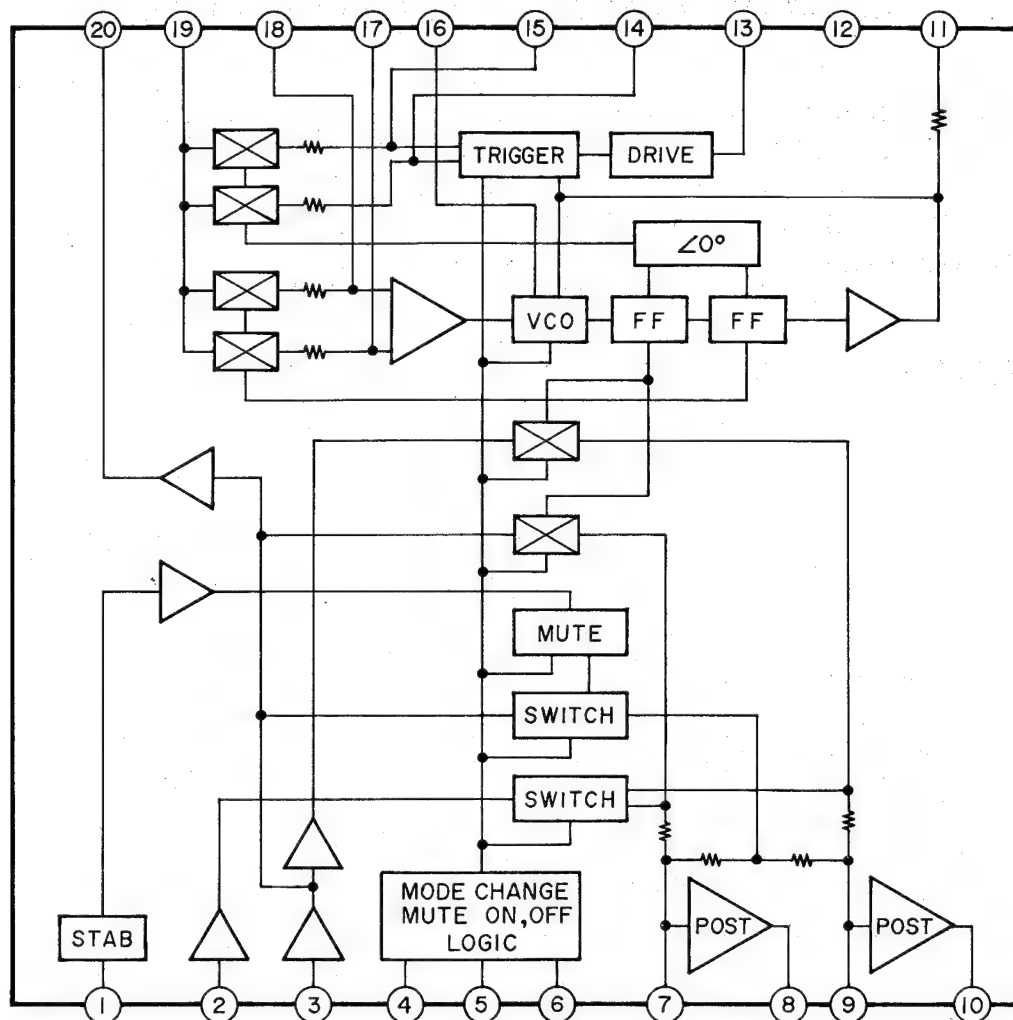
SCHEMATIC DIAGRAM OF ICs

LA1231N



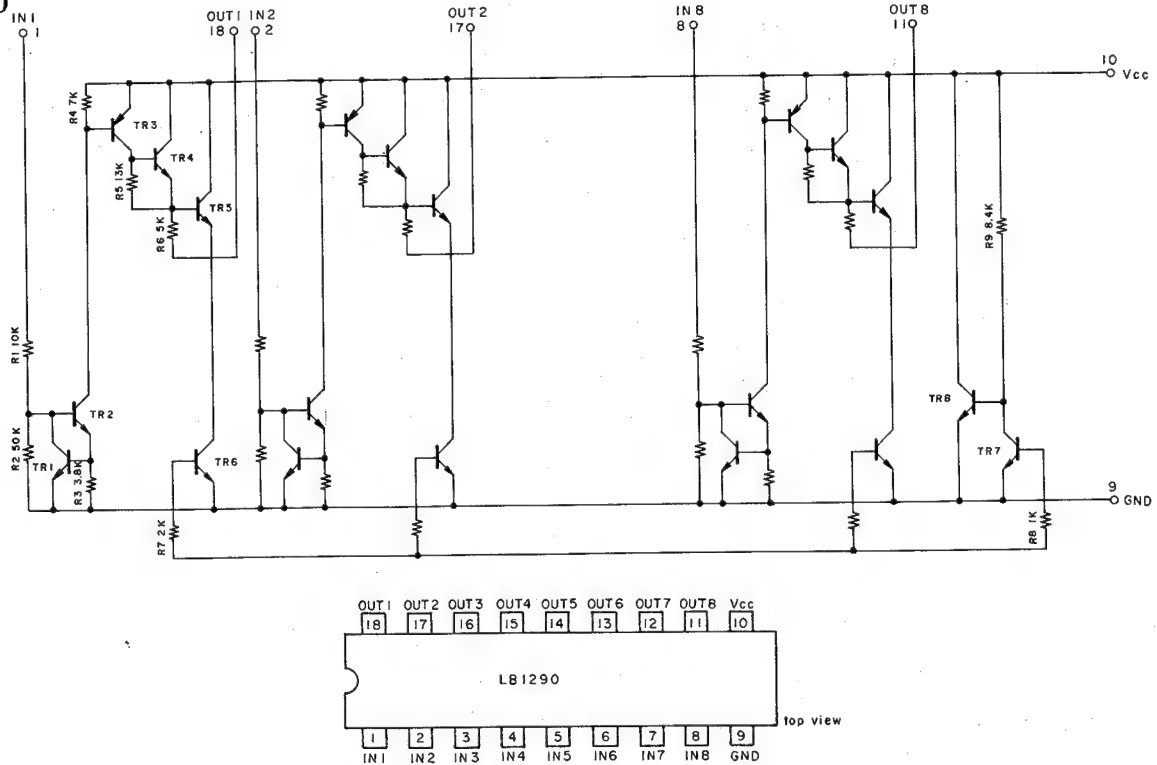
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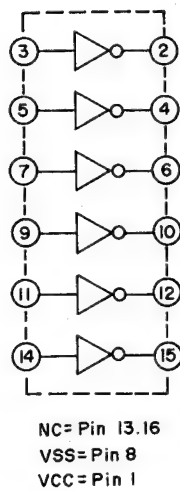


| Pin No. | Description | Pin No. | Description |
|---------|-----------------------------|---------|--|
| 1 | VCC | 11 | Compulsory Mono, VCO Stop, 19kHz Check |
| 2 | AM Input | 12 | GND |
| 3 | FM Input | 13 | Stereo Indicator |
| 4 | FM/AM SW Mute Time Constant | 14 | Pilot Sync Detect Filter |
| 5 | Mute Control (ON/OFF) | 15 | VCO Time Constant |
| 6 | FM/AM SW | 16 | PLL Loop Filter |
| 7 | Post Amp (Negative in) | 17 | PLL Loop Filter |
| 8 | Post Amp (LCH out) | 18 | Phase Comparator Input |
| 9 | Post Amp (Negative in) | 19 | Phase Comparator Input |
| 10 | Post Amp (Rch out) | 20 | Composite Amp Output |

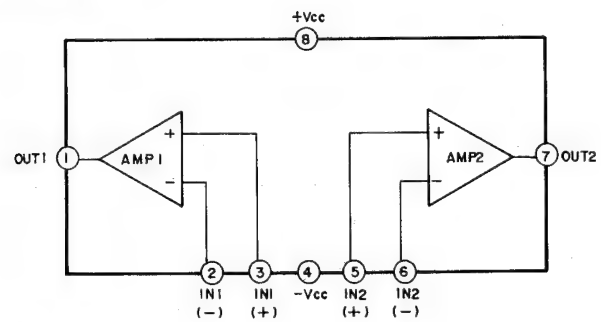
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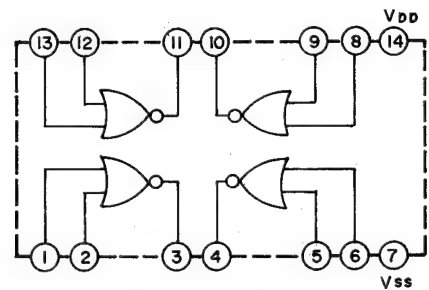
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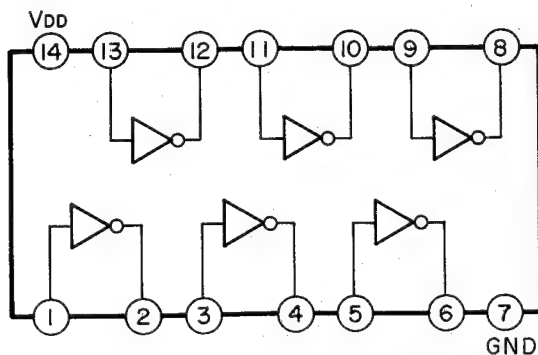
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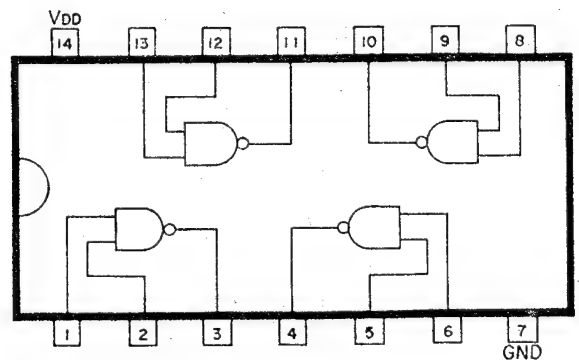
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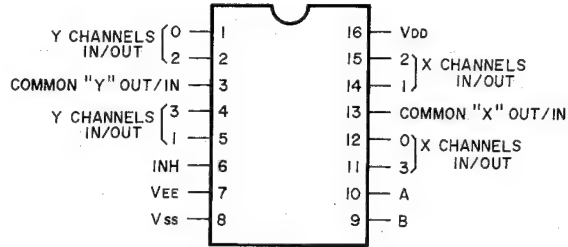
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LC4011B

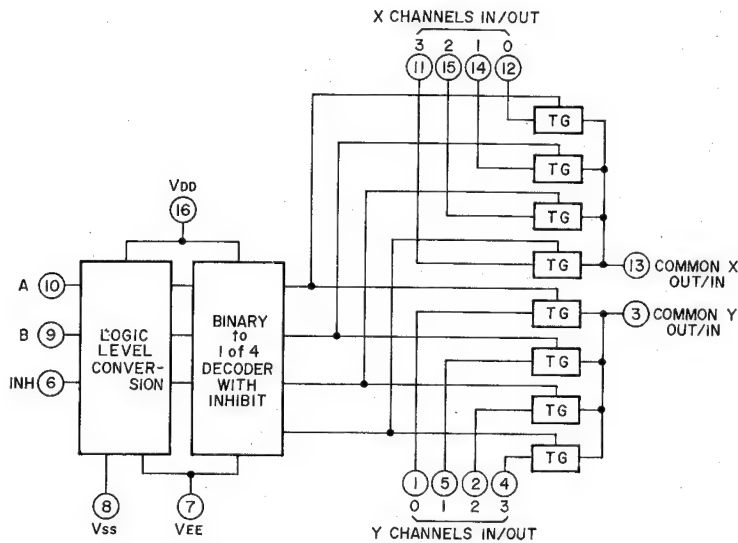


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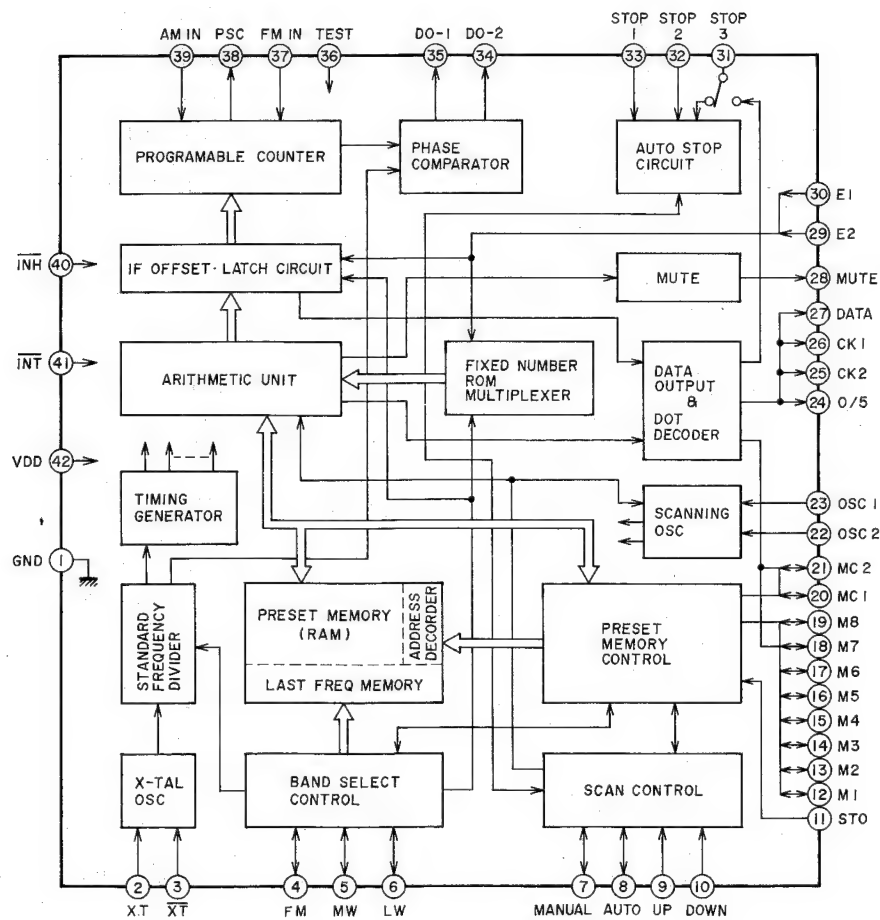


| INHIBIT (6) | A (10) | B (9) | "ON" CHANNEL |
|----------------|-----------|----------|--------------|
| L | L | L | 0X, 0Y |
| L | H | L | 1X, 1Y |
| L | L | H | 2X, 2Y |
| L | H | H | 3X, 3Y |
| H | X | X | NONE |

X=DON'T CARE

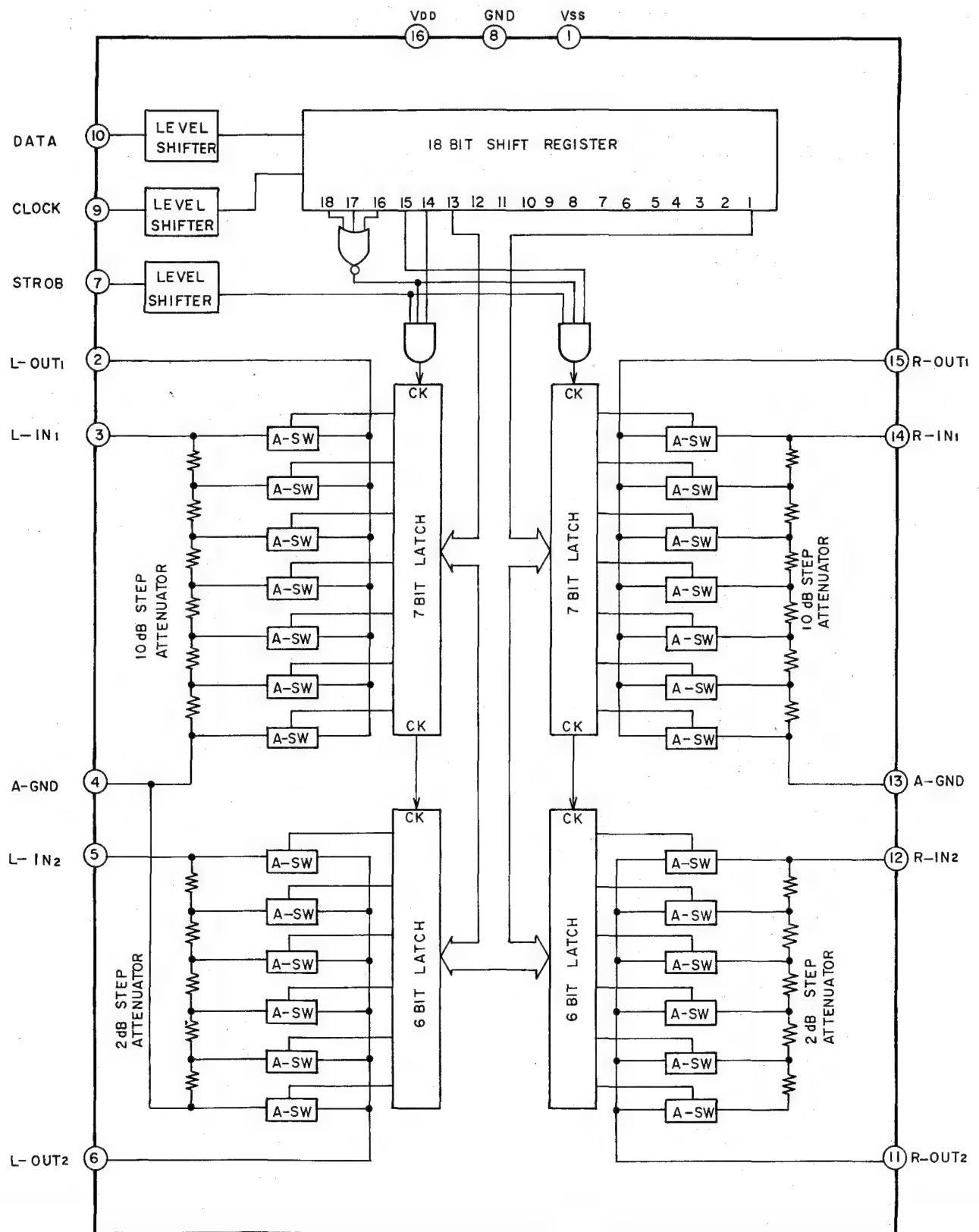


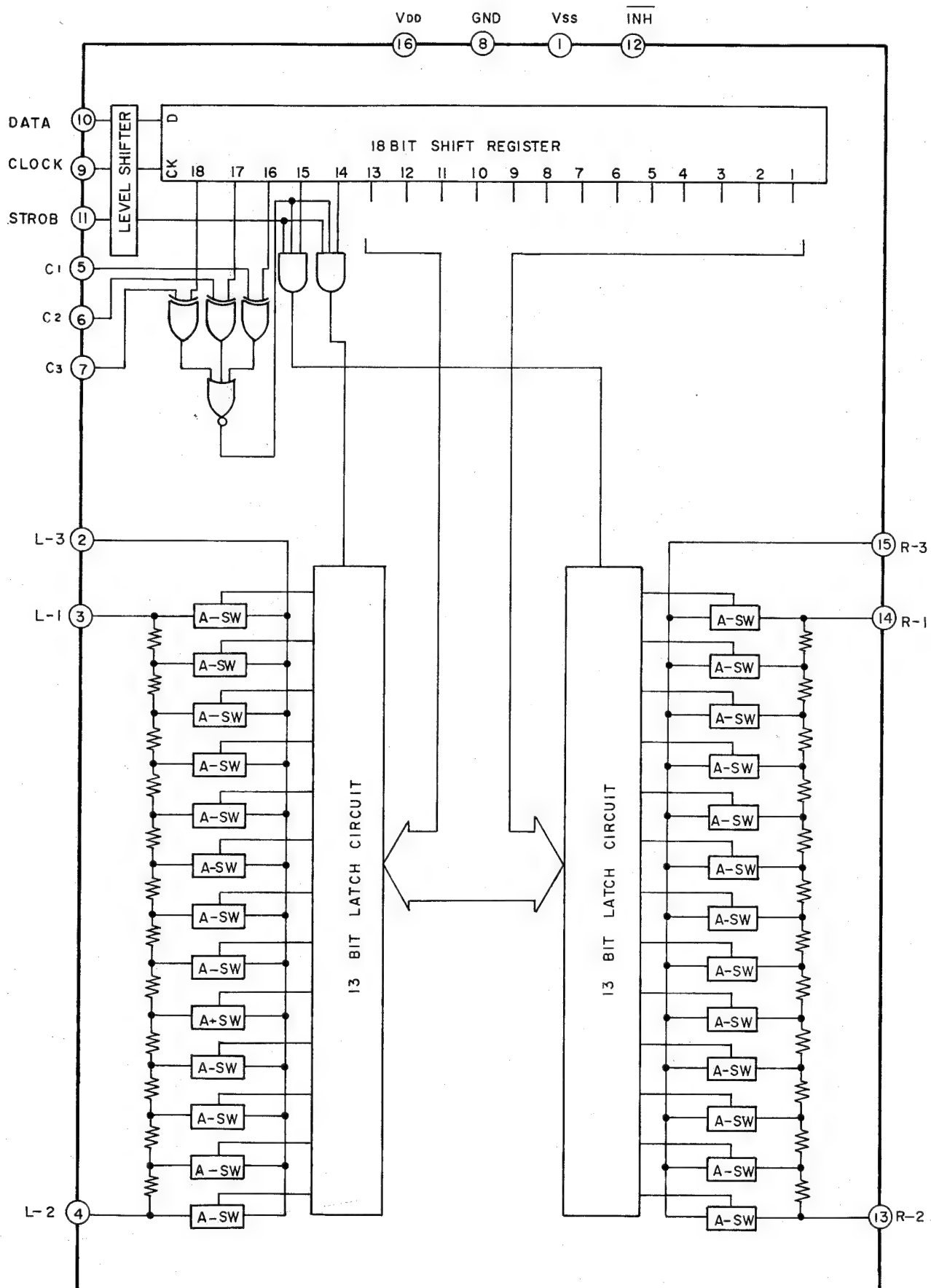
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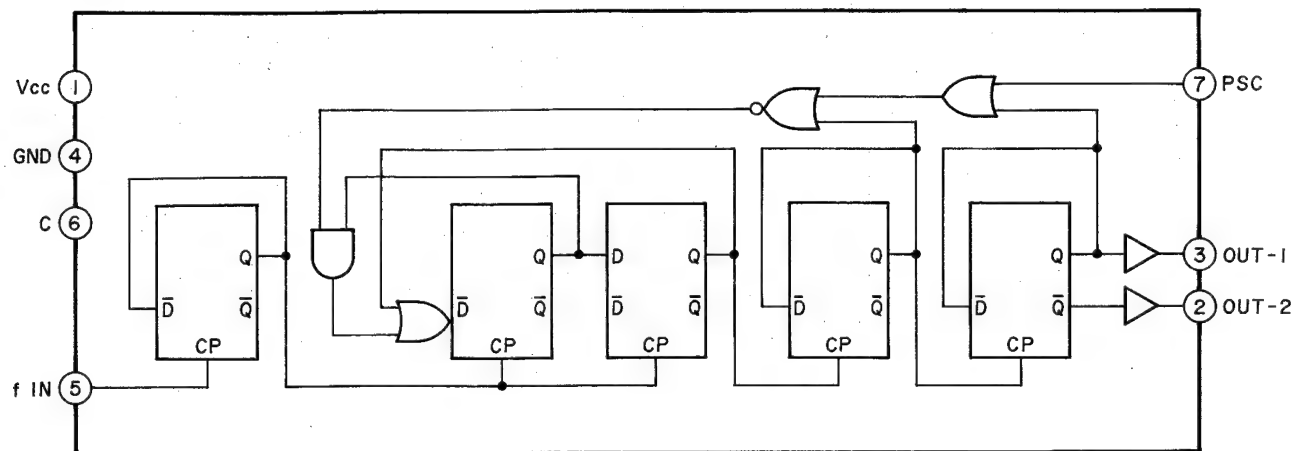
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TC9154P

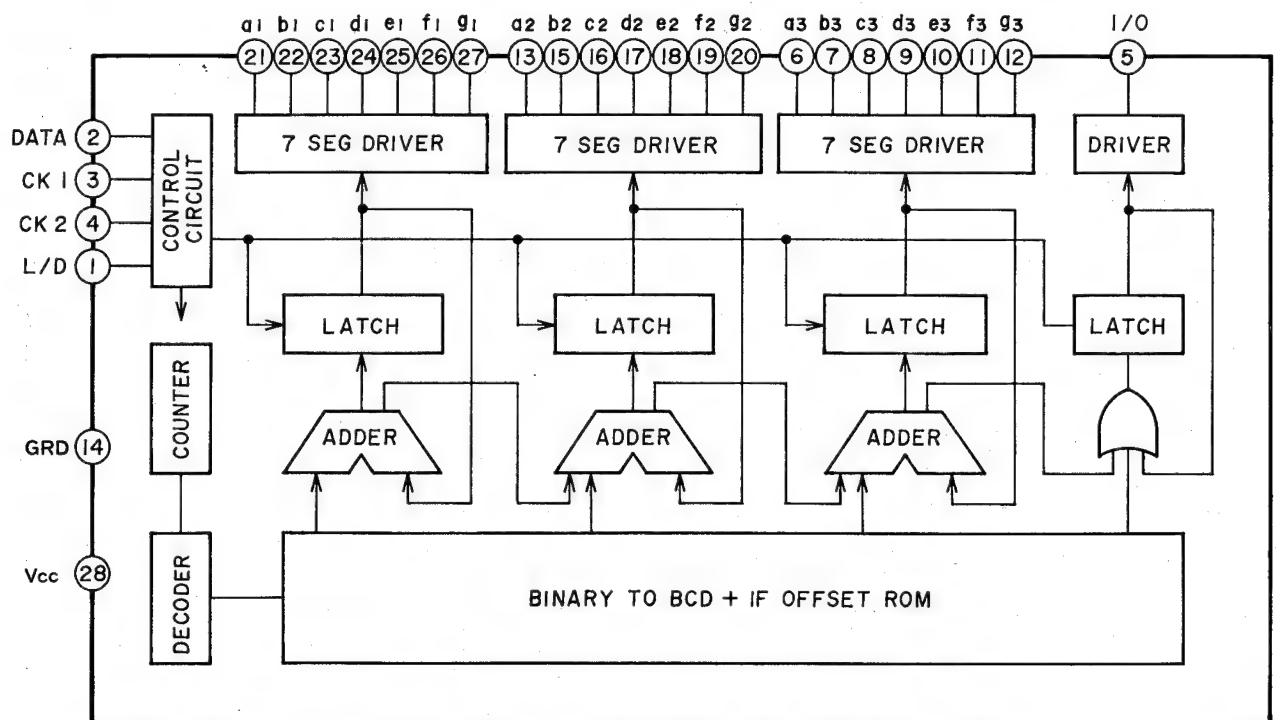




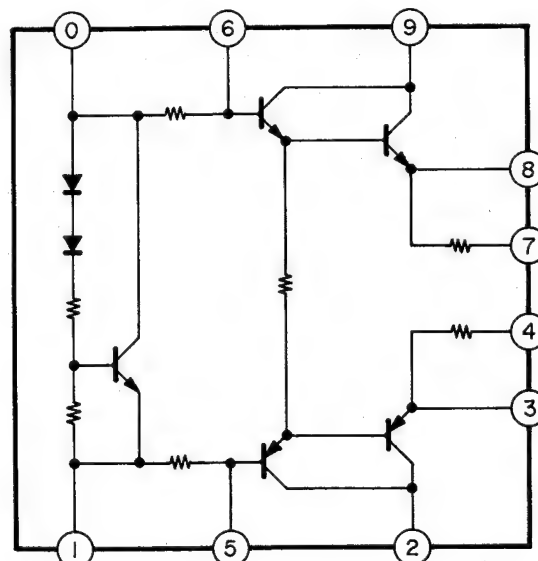
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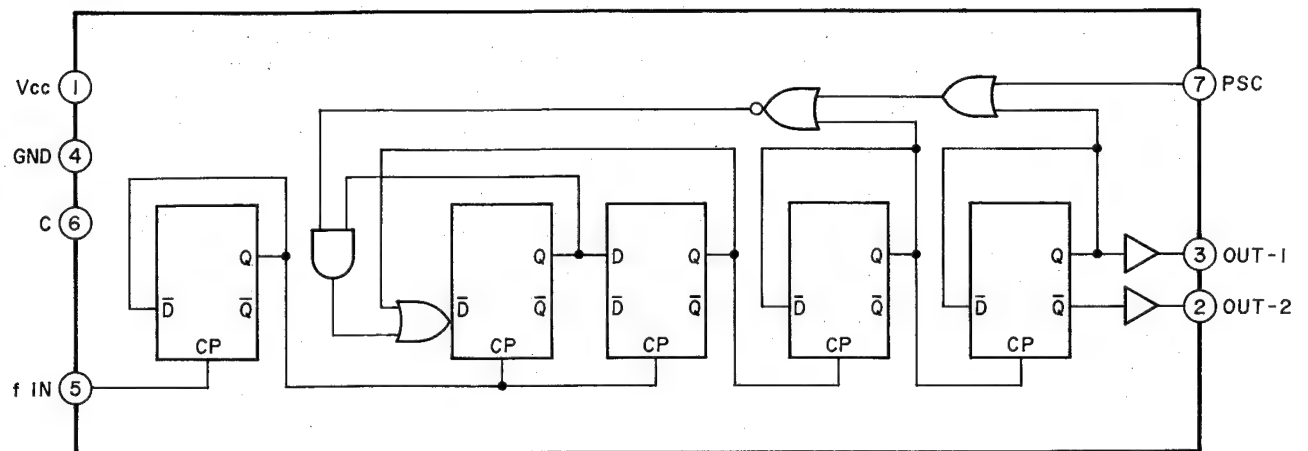
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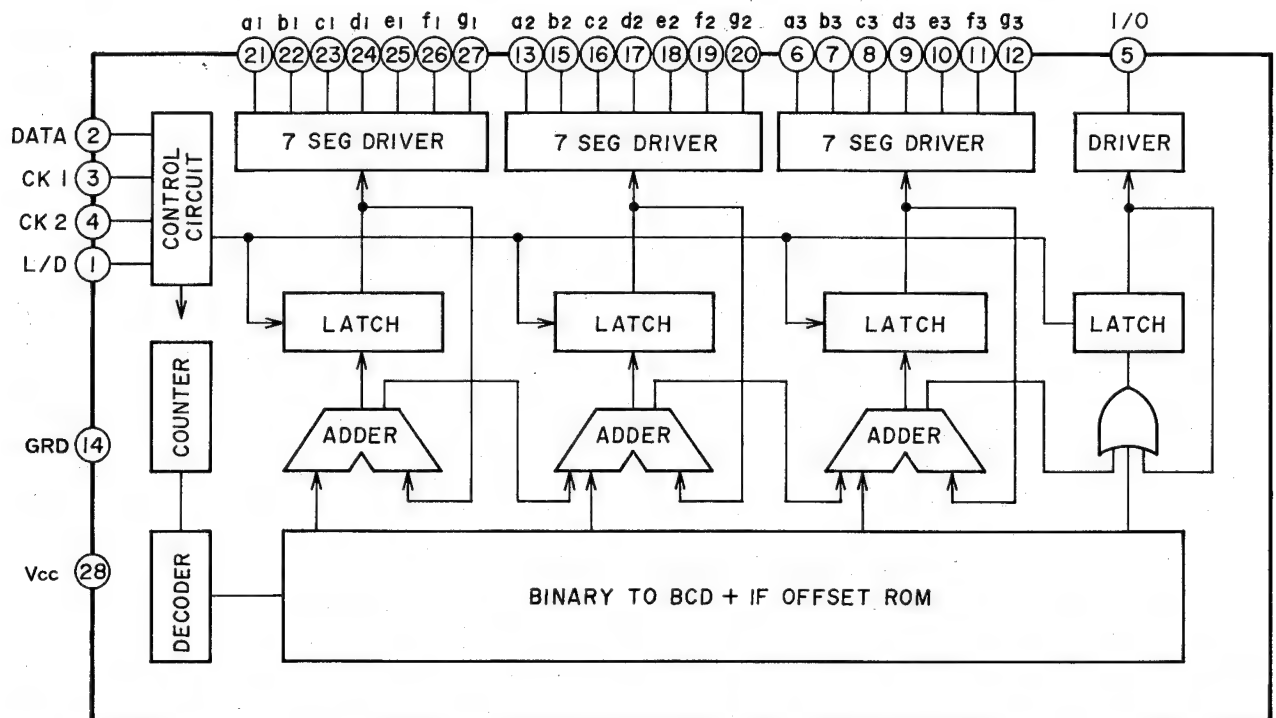
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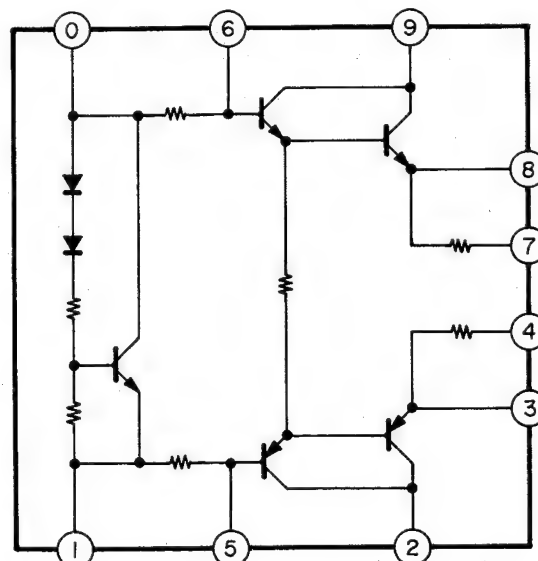
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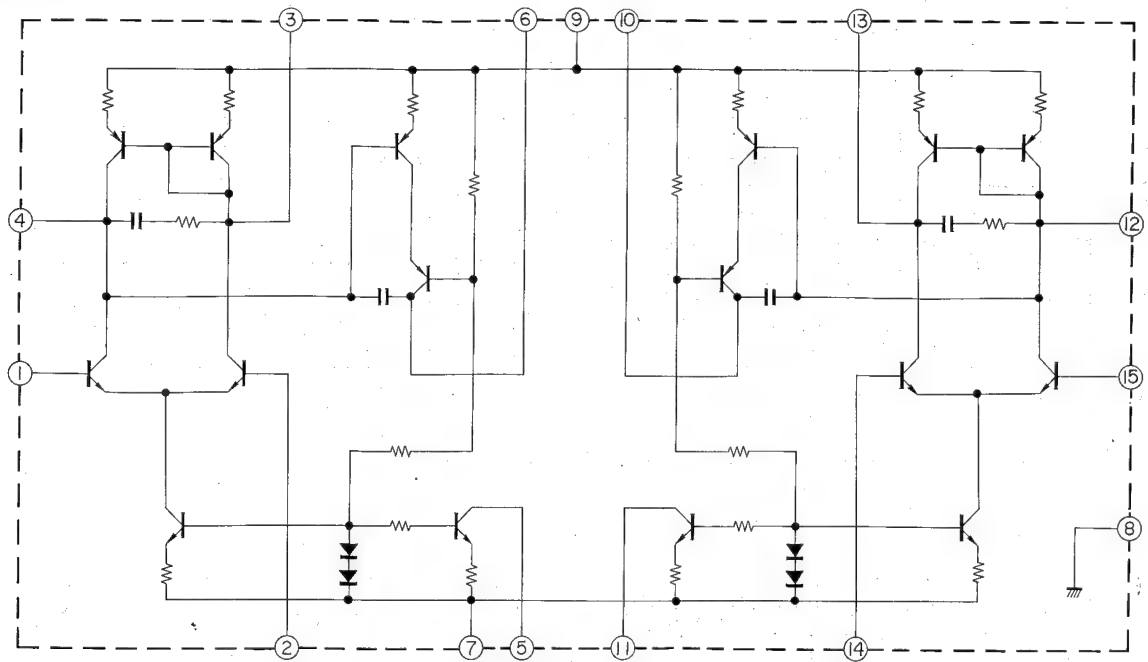
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STK 1050



STK 3042Z



STK 4833

